	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING AMENDED REPORT													
		AF	PPLICATION FO	OR PERM	IIT TO DRILL	1. WELL NAME and NUMBER NBU 921-2004CS								
2. TYPE O	F WORK	DRILL NEW WELL	REENTER	P&A WELL	. DEEPEN	WELL (3. FIELD OR WILDCAT							
4. TYPE O	F WELL				hane Well: NO		•			5. UNIT or COMMUNI	TIZATION NATURAL		ENT NAM	1E
6. NAME (OF OPERATOR		KERR-MCGEE OIL							7. OPERATOR PHONE				
8. ADDRE	SS OF OPERAT	OR								9. OPERATOR E-MAII	L			
	AL LEASE NUM	BER	P.O. Box 173779		NERAL OWNERS	SHIP				12. SURFACE OWNER		anadarko	.com	
	_, INDIAN, OR S	UTÚ0575		FEC	DERAL (III) IND	DIAN 🔵	STATE () FEE(\circ	~	DIAN 📵		~	EE 🔵
13. NAME	OF SURFACE	OWNER (if box 12 :	= 'fee')							14. SURFACE OWNER	R PHONE	(if box 12	= 'fee')	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNE	R E-MAIL	(if box 12	= 'fee')	
	N ALLOTTEE O	R TRIBE NAME			TEND TO COMM		RODUCTION	FROM		19. SLANT				
(If box 12	! = 'INDIAN') THE	UTE INDIAN TRIBE			central contract of the contra		ing Applicati	on) NO		VERTICAL DIF	RECTION	AL 📵 H	IORIZONT	ΓAL 🛑
20. LOC/	ATION OF WELL	-		FOOTAGE	ES	QTF	R-QTR	SEC.	TION	TOWNSHIP	RA	ANGE	МЕ	ERIDIAN
LOCATIO	N AT SURFACE		81	9 FSL 625	5 FEL	SE	ESE	2	0	9.0 S	2	1.0 E		S
Top of U	ppermost Prod	lucing Zone	84	FSL 1804	4 FEL	SV	WSE	2	0	9.0 S	2	1.0 E		S
At Total	Depth		84	FSL 1804	4 FEL	SV	WSE	2	0	9.0 S 21.0 E				S
21. COUN	ITY	UINTAH		22. DI	STANCE TO NEA	REST LEA 84		eet)		23. NUMBER OF ACR	ES IN DRI 16		IT	
					STANCE TO NEA ied For Drilling		leted)	POOL		26. PROPOSED DEPT	H 11497	TVD: 101	73	
27. ELEV	ATION - GROUN	ID LEVEL		28. BC	OND NUMBER		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE					ı F		
		4874				WYB00	8000291 43-8496							
Ctring	Uala Cina	Cooling Size	Langth	Waimb4			Cement Information						Mainht	
String Surf	Hole Size	Casing Size 8.625	0 - 2830	Weight 28.0	Grade & T							Weight 15.8		
					1111							1.15	15.8	
Prod	7.875	4.5	0 - 11497	11.6	HCP-110	LT&C	12	.5	Pre	mium Lite High Stre	ngth	350	3.38	12.0
										50/50 Poz		1670	1.31	14.3
					A	TTACHN	MENTS							
	VER	RIFY THE FOLLO	WING ARE AT	ACHED	IN ACCORDAN	ICE WITI	H THE UTA	AH OIL AI	ND GAS	CONSERVATION G	ENERA	L RULES		
⊮ w	ELL PLAT OR M	AP PREPARED BY I	LICENSED SURVE	YOR OR E	NGINEER		СОМ	PLETE DR	ILLING PI	LAN				
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)								1 5. IF OPE	RATOR I	S OTHER THAN THE LI	EASE OW	NER		
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)								GRAPHIC	AL MAP					
NAME C	ara Mahler			TITLE	Regulatory Analy	st I			PHONE	720 929-6029				
SIGNATU	IRE			DATE	11/27/2012	EMAIL cara.mahler@anadarko.com								
	ber assigned 047533660			APPRO	DVAL				Bo	acqill				
									Pern	nit Manager				

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-2004CS
Surface: 819 FSL / 625 FEL SESE
BHL: 84 FSL / 1804 FEL SWSE

Section 20 T9S R21E

Unitah County, Utah Mineral Lease: UTU 0575

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2.a <u>Estimated Tops of Important Geologic Markers:</u> <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:</u>

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,626'	
Birds Nest	1,871'	Water
Mahogany	2,378'	Water
Wasatch	4,937'	Gas
Mesaverde	7,925'	Gas
Sego	10,173'	Gas
Castlegate	10,247'	Gas
Blackhawk	10,629'	Gas
TVD =	11,229'	
TD =	11,497'	

2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. <u>Drilling Fluids Program</u>:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:

7.a Blackhawk (Part of Mesaverde Group)

Maximum anticipated bottom hole pressure calculated at 11229' TVD, approximately equals 7,187 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,700 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 6,206 psi (0.61 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,994 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program Onshore Order #2 – Air Drilling Variance

 $Kerr-McGee\ Oil\ \&\ Gas\ Onshore\ LP\ (KMG)\ respectfully\ requests\ a\ variance\ to\ several\ requirements\ associated\ with\ air\ drilling\ outlined\ in\ Onshore\ Order\ 2$

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may

be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooic line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooic line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

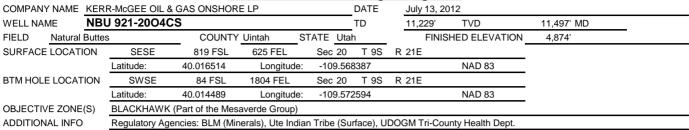
10. Other Information:

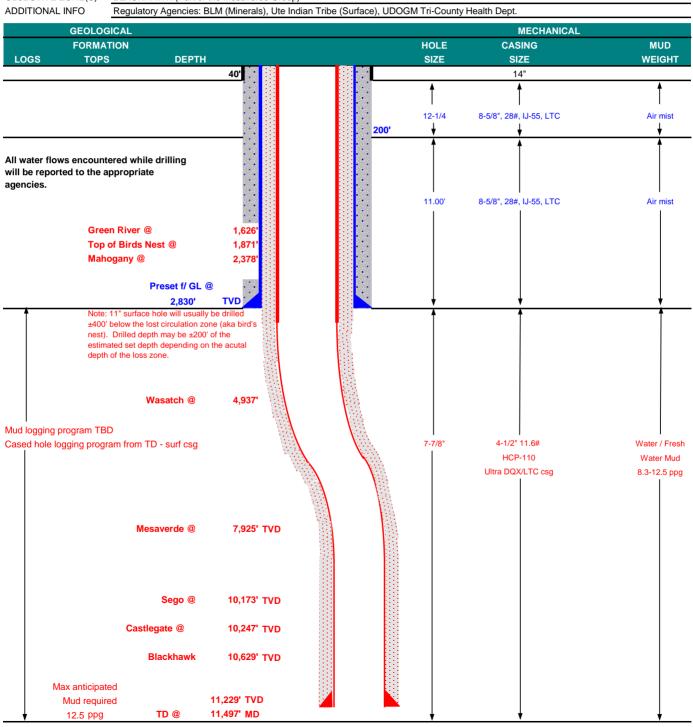
Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

RECEIVED: November 27, 2012



KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program







KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program

CASING PROGRAI	<u>VI</u>	DESIGN FACTORS									
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TEN	SION
CONDUCTOR	14"	(0-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,830	28.00	IJ-55	LTC	1.90	1.42	5.02	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.19		3.40
	4-1/2"	5,000	to	11,497'	11.60	HCP-110	LTC	1.19	1.19	4.58	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)		1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water	to surface, o	ption 2 will b	e utilized	
Option 2	LEAD	2,330'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
Т	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,437'	Premium Lite II +0.25 pps	350	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	7,060'	50/50 Poz/G + 10% salt + 2% gel	1,670	35%	14.30	1.31
			+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be	taken at 1	,000' min	imum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

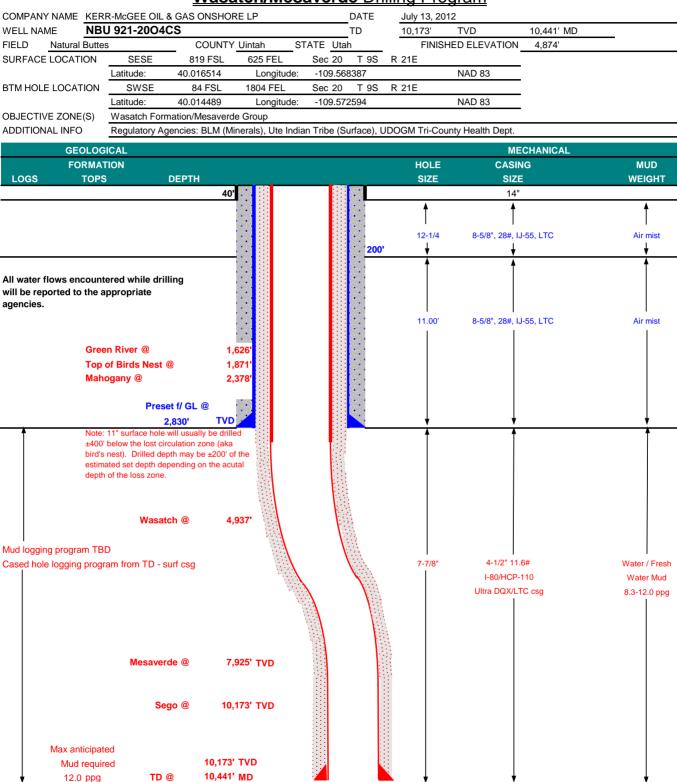
DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Travis Hansell		
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young	·	

RECEIVED: November 27, 2012

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained



KERR-McGEE OIL & GAS ONSHORE LP Wasatch/Mesaverde Drilling Program





KERR-McGEE OIL & GAS ONSHORE LP Wasatch/Mesaverde Drilling Program

CASING PROGRAI	DESIGN FACTORS										
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TEN	ISION
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SURFACE	8-5/8"	0	to	2,830	28.00	IJ-55	LTC	1.90	1.42	5.02	N/A
								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.00		2.70
								10,690	8,650	223,000	
	4-1/2"	5,000	to	10,441'	11.60	HCP-110	LTC	1.53	1.36	4.33	

Surface Casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

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Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient

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CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIG	HT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele					
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		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water	to surface, o _l	otion 2 will b	e utilized		
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		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,431'	Premium Lite II +0.25 pps	350	35%	12.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	6,010'	50/50 Poz/G + 10% salt + 2% gel	1,420	35%	14.30		1.31
		+ 0.1% R-3					

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

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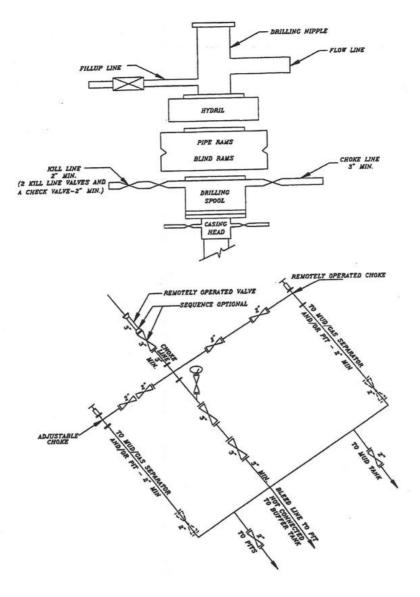
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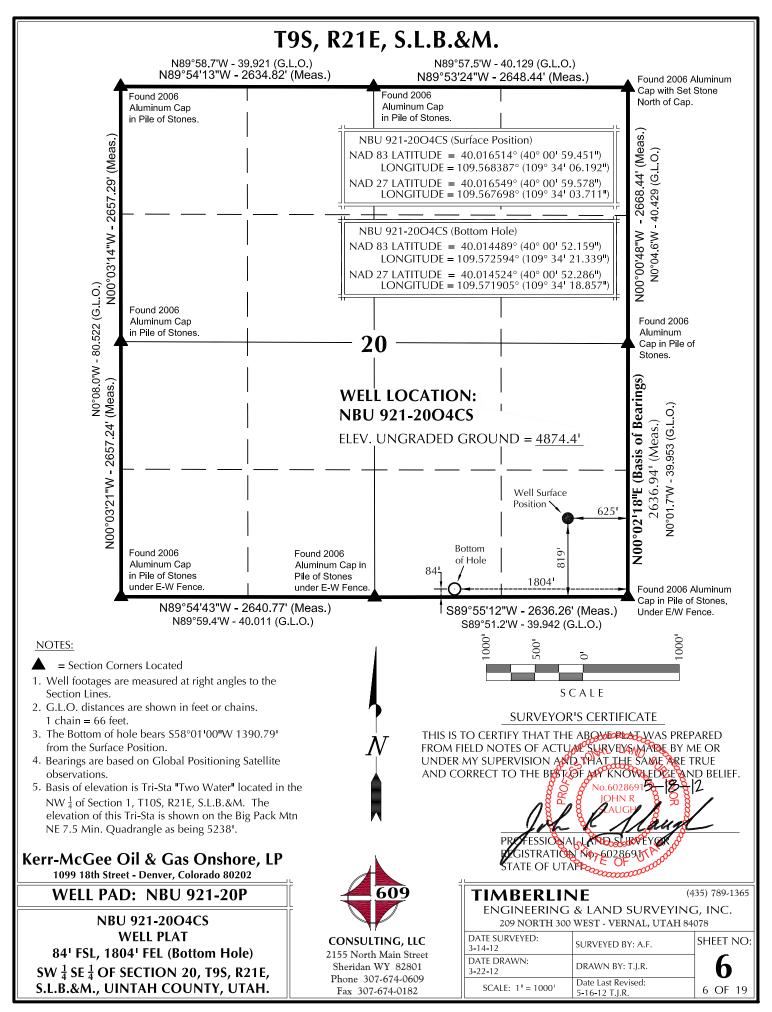
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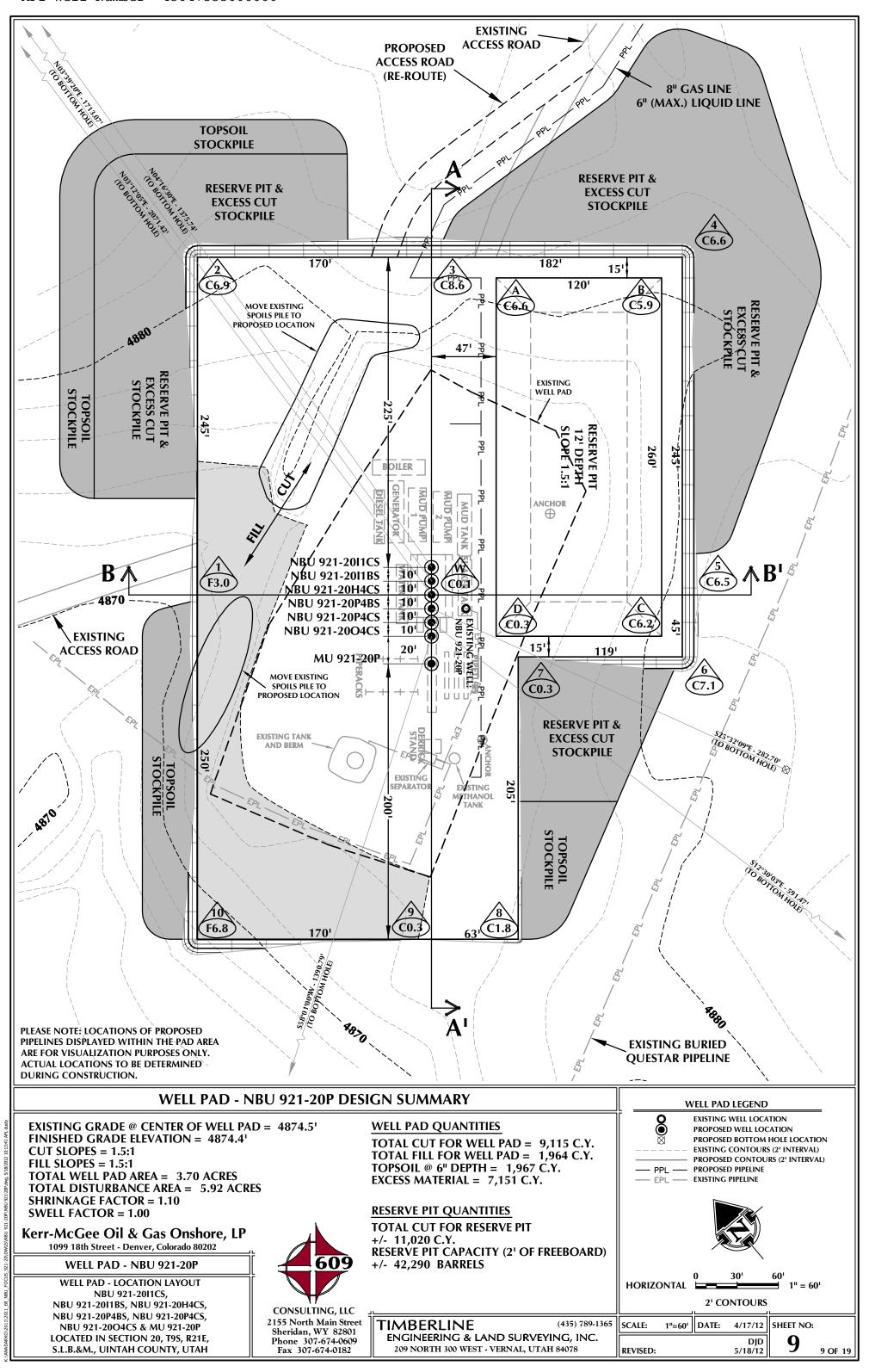
EXHIBIT A NBU 921-2004CS

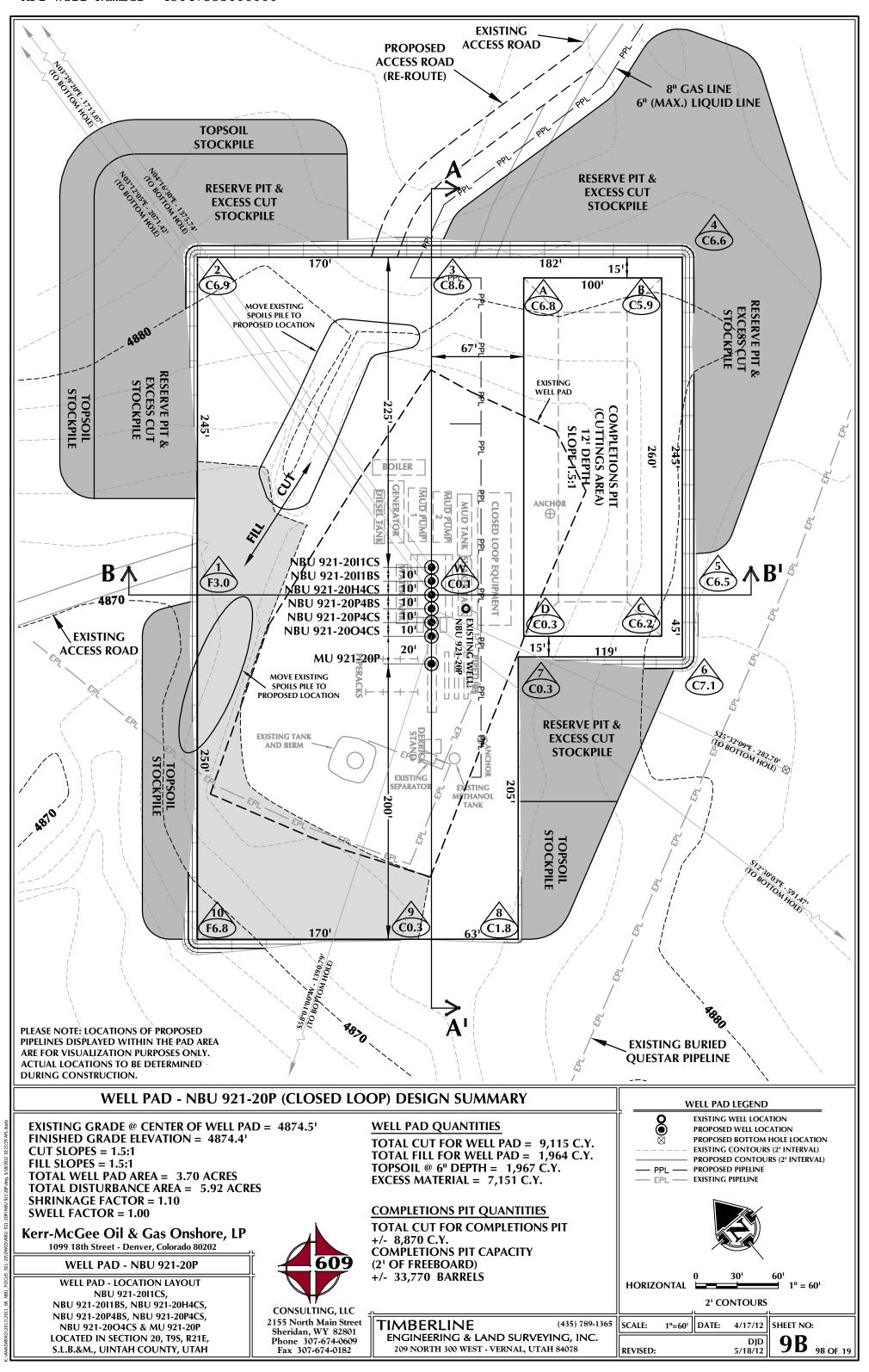


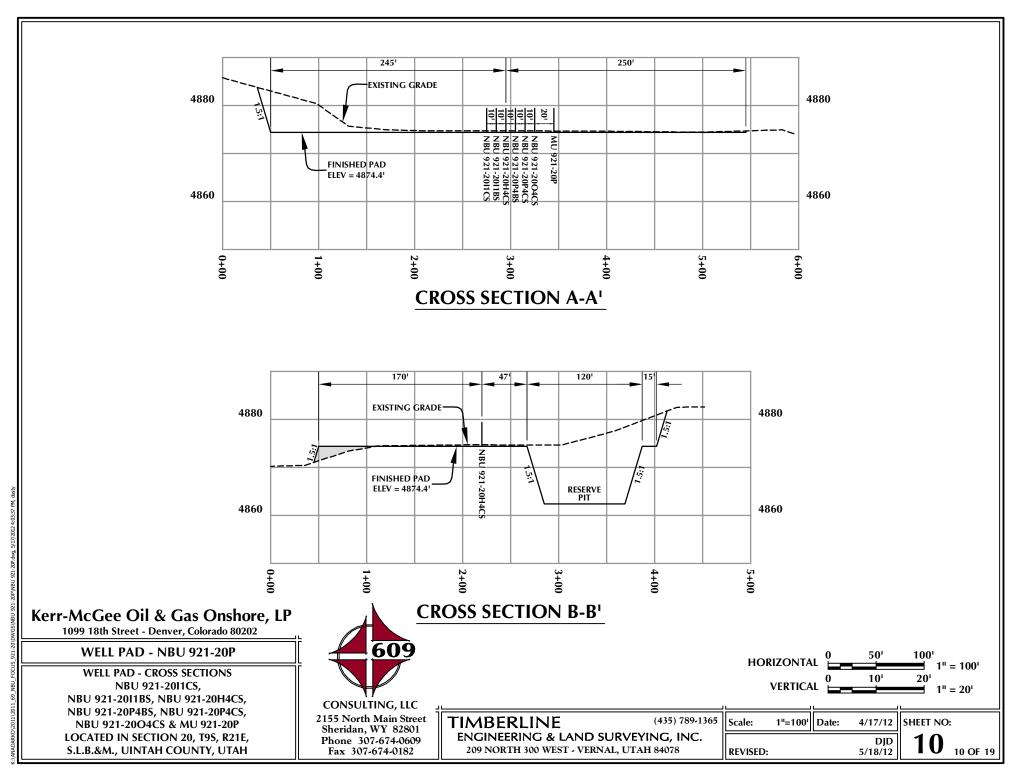
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

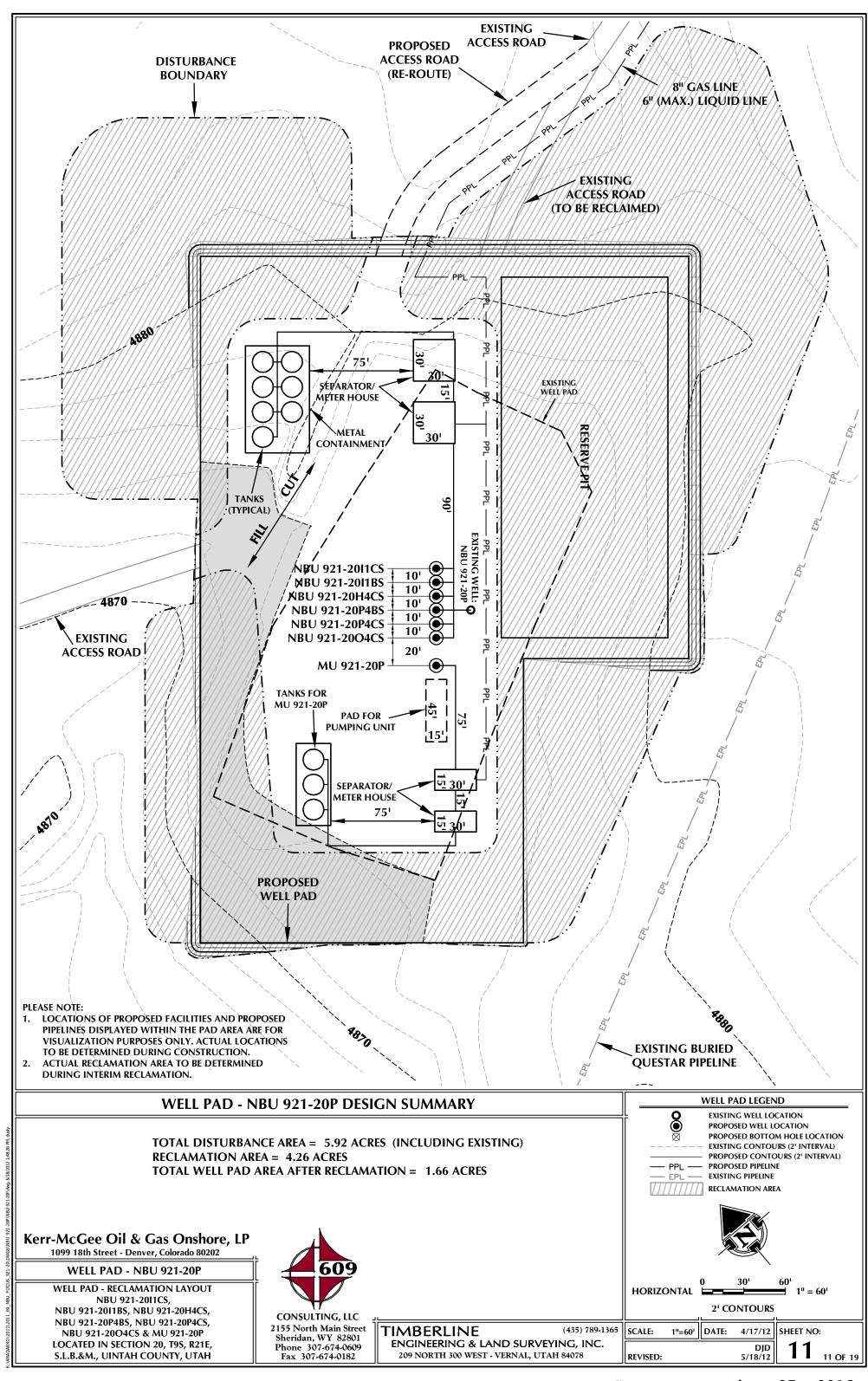


			SURF	ACE POSI	TION						В	OTTOM HOLE		
WELL NAME	NAME NA LATITUDE			NAD27				NAE			NAD			
NBU	LATITUDE 40°00'59.829"	LONGITI		LATITUD	E LONG 56" 109°34'		FOOTAGES		TUDE 13.385"		GITUDE	LATITUDE	LONGITUDE 109°34'02.001"	
921-20I1CS	40.016619°	109°34'05 109.56827		0.016655°			857' FSL 593' FEL	40.020		109°34	'04.482" 7912°	40.020420°	109°34'02.001" 109.567222°	2229' FSL 491' FEL
NBU	40°00'59.754"		.862" 4		81" 109°34'		850' FSL		16.645"		104.484"	40°01'16.772"	109°34'02.003"	
921-20I1BS	40.016598°	109.56829		0.016634			599' FEL	40.021		109.56		40.021326°	109.567223°	491' FEL
NBU 921-20H4CS	40°00'59.678" 40.016577°	109°34'05 109.56831		0.016613°	05" 109°34' ° 109.567		842' FSL 606' FEL	40.022	20.113" :254°	109°34 109.56	'04.490" 7914°	40.022289°	109°34'02.008" 109.567224°	2397' FNL 491' FEL
NBU	40°00'59.602"		.028" 4	0°00'59.7	29" 109°34'		834' FSL	40°00'.	57.083"		'04.459"			
921-20P4BS NBU	40.016556° 40°00'59.526"	109.56834		0.016591	° 109.567 53" 109°34'		612' FEL	40.015	856° 53.823"	109.56		40.015892° 40°00'53.950"	109.567216°	490' FEL
921-20P4CS	40.016535°	109°34'06 109.56836		0.016570°			827' FSL 618' FEL	40.014		109°34	'04.456" 7905°	40.014986°	109°34'01.975" 109.567215°	249' FSL 490' FEL
NBU	40°00'59.451"	109°34'06	.192" 4		78" 109°34'	03.711"	819¹ FSL		52.159"		121.339"		109°34'18.857"	
921-20O4CS MU	40.016514° 40°00'59.300"	109.56838 109°34'06		0.016549° 0°00'59.4			625' FEL 804' FSL	40.014	489°	109.57	2594	40.014524°	109.571905°	1804' FEL
921-20P	40.016472°	109.56843		0.016507°	1.000		638' FEL							
NBU	40°00'59.444"	109°34'05		0°00'59.5			818' FSL							
921-20P	40.016512°	109.56827	3° 4	0.016547°	° 109.567 VE COORDI		593' FEL	- Diti	- 4- D-44	11-1-				
WELL NAME	NORTH	EAST	WELL	NAME	NORTH	EAS		. NAME	NOR		EAST	WELL NAM	IE NORTH	EAST
NBU	1371.9	102.6¹	NBU	INAME	1709.61	109.2	NIDLI	TYATTLE	2068		115.7	NBU	-255.1	121.9
921-20I1CS			921-20				921-2	0H4CS	2000	0.2	113./	921-20P4B9	s -255.1	121.9
WELL NAME NBU	NORTH	EAST	WELL NBU	NAME	NORTH	EAS	T //			1	4 4			
BASIS OF THE SE $\frac{1}{4}$	S C A L E S C A L E BEARINGS IS OF SECTION WHICH IS T.	THE EAST 20, T9S, R:	.09	4. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	-736.7 A. to Exist W. H. 108. Stist W. H. 108. M. H	W. M. 168.	Az=3. 03°12'05' (To Botto	om Ho	71.42	- ; '	 	Az=3.65 03°39'20"E (To Bottor Az=4.275 4°16'30"E - (To Bottom	- 1713.07' m Hole) 500° - 1375.74'	
	POSITIONING ITIONS TO BE		E 12'18"E	10 Bottor	m Hole) 38.0166730	0.79	31. 19.00.	(10 00)	S12°	× 591.47	EXIST (ING WELL:	NBU 921-2	20P
1099 1	Gee Oil & 8th Street - De L PAD - L PAD INTI	NBU 92 RFERENCE	rado 80 21-2 (CE PL/	0202 OP	P T		609		- 11	ENGIN		G & LAND	(4 SURVEYINC RNAL, UTAH 840	,
	WELLS - NBU		,	c		CONC	17	c	DATI	E SURVE				
	J 921-2011BS, J 921-20P4BS,			,	III .		J LTING, LI orth Main Str		3-14	- 12		SURVEYED B	BY: A.F.	SHEET NO:
	BU 921-200468,			,	 		an WY 8280			E DRAW	N:	DRAWN BY:	T.J.R.	Ω
LOC	ATED IN SECT	TION 20, T	9S, R21	Ε,		Phone	307-674-060)9	3-22		II (0'	Date Last Rev	*	U
	3.&M., UINTA	H COUNT	Y, UTAI	н.	ll l	Fax 3	07-674-0182	;	S	CALE: 1	= 60'	5-16-12 T.J.R		8 OF 19









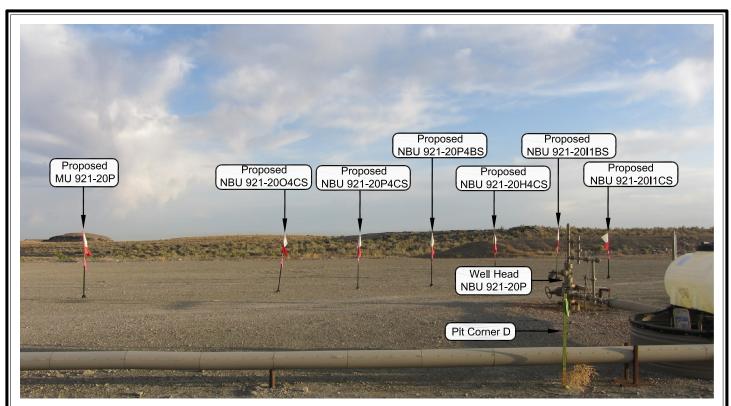


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY

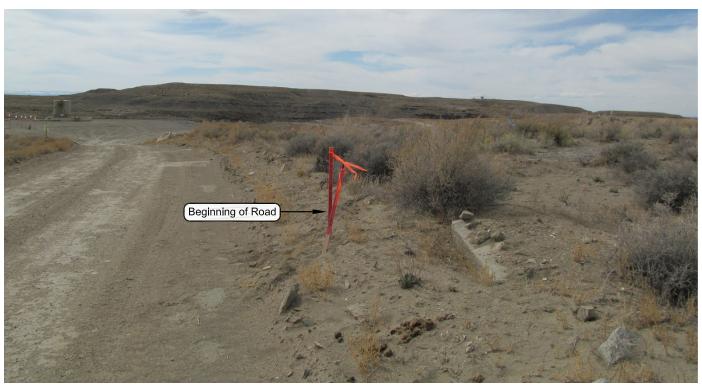


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20P

LOCATION PHOTOS NBU 921-2011CS, NBU 921-2011BS, NBU 921-20H4CS, NBU 921-20P4BS, NBU 921-20P4CS, NBU 921-20O4CS & MU 921-20P LOCATED IN SECTION 20, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC

2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

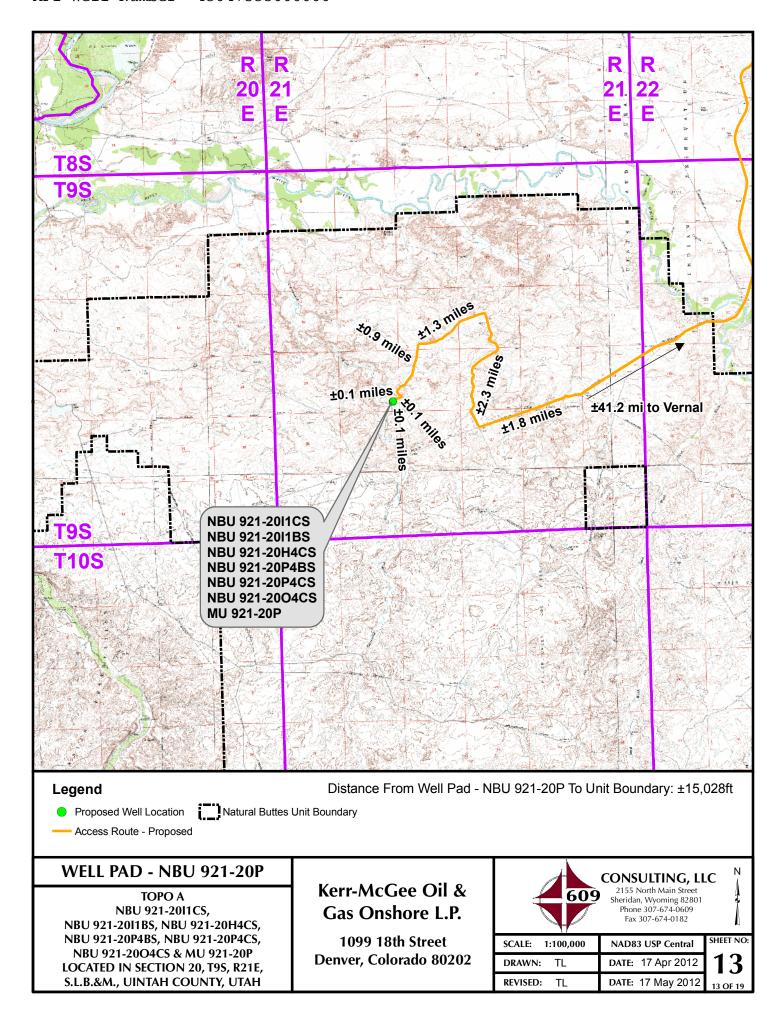
Т	L	M	R	F	R	ı	ı	N	E

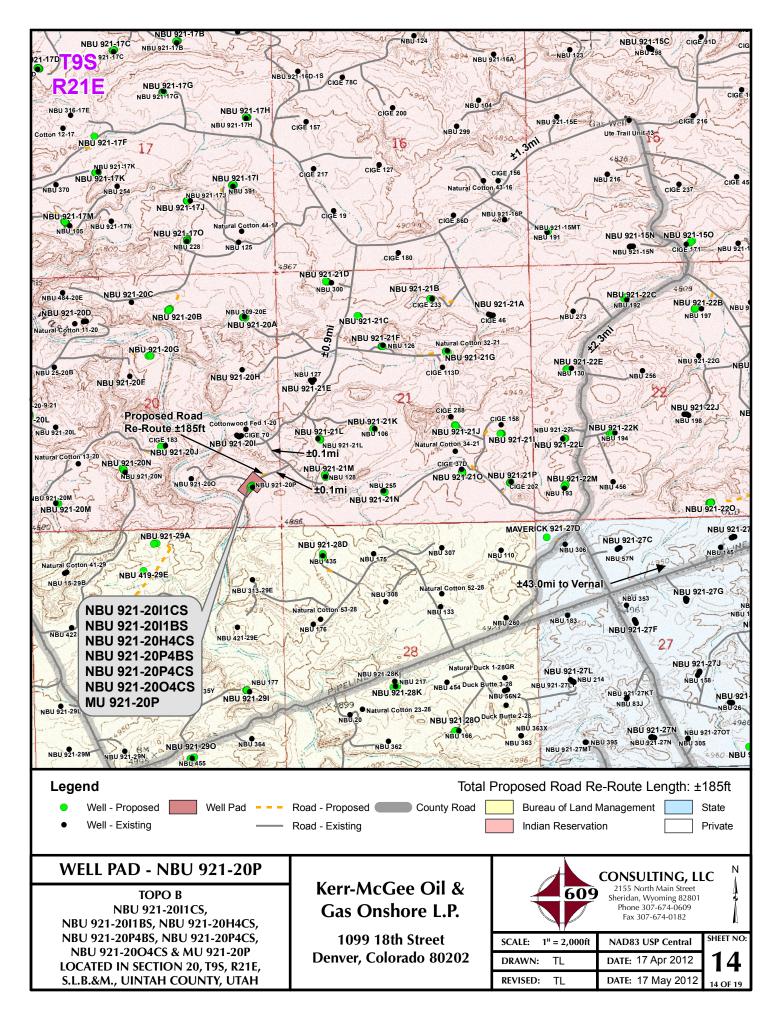
(435) 789-1365

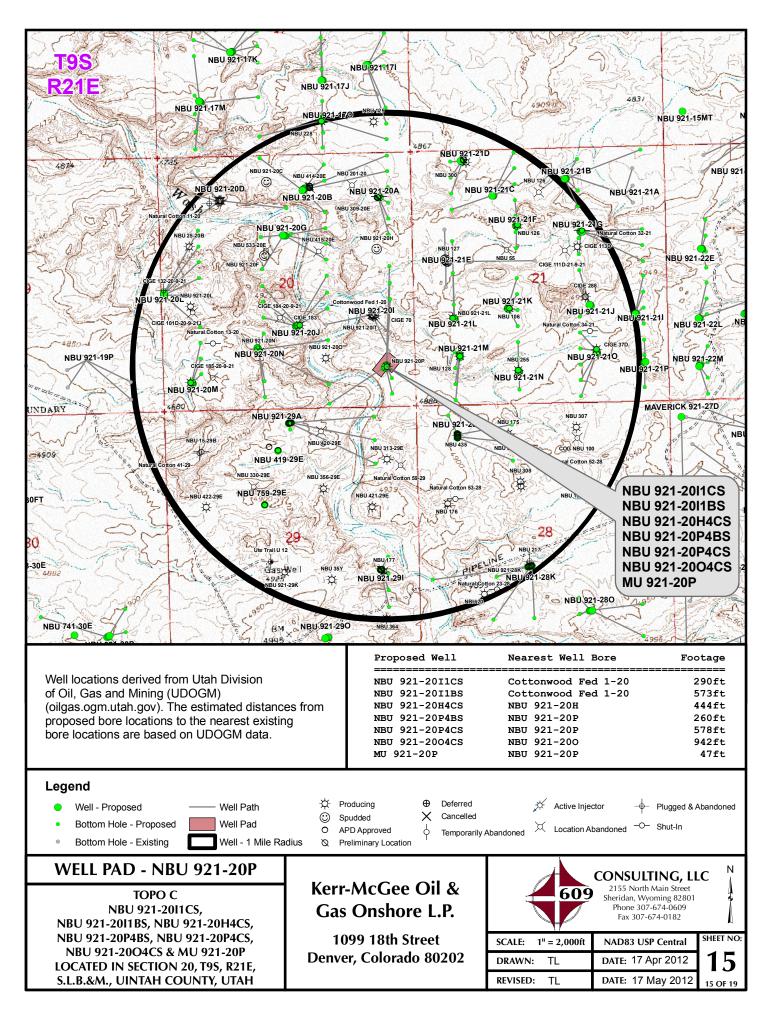
12 OF 19

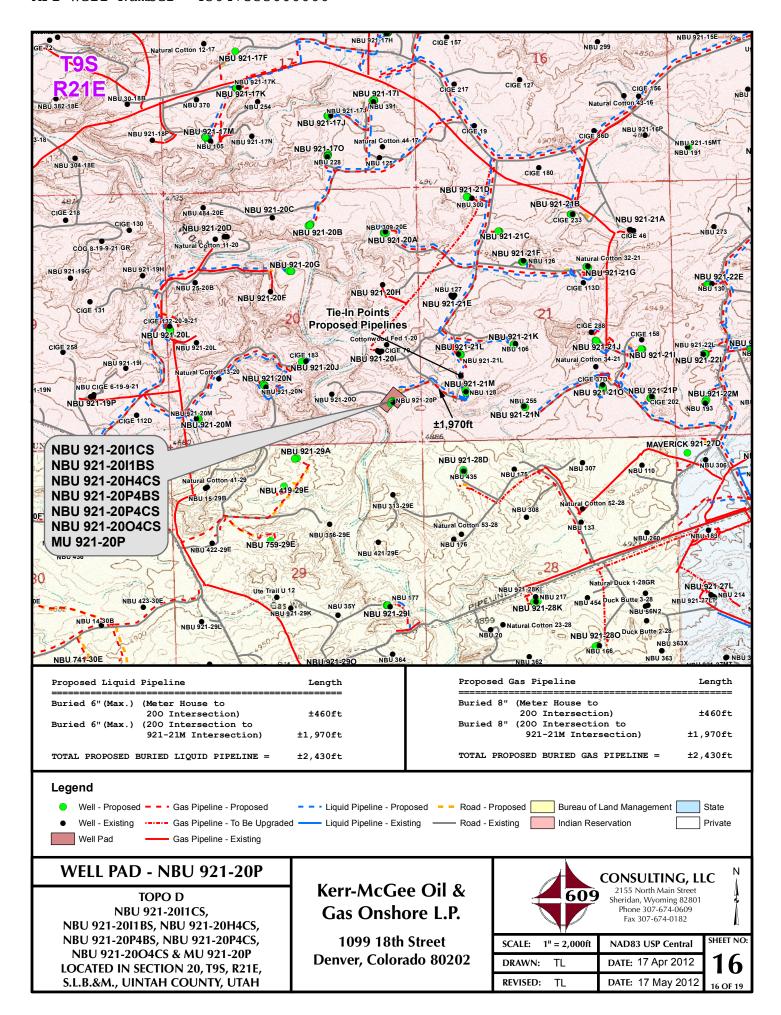
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

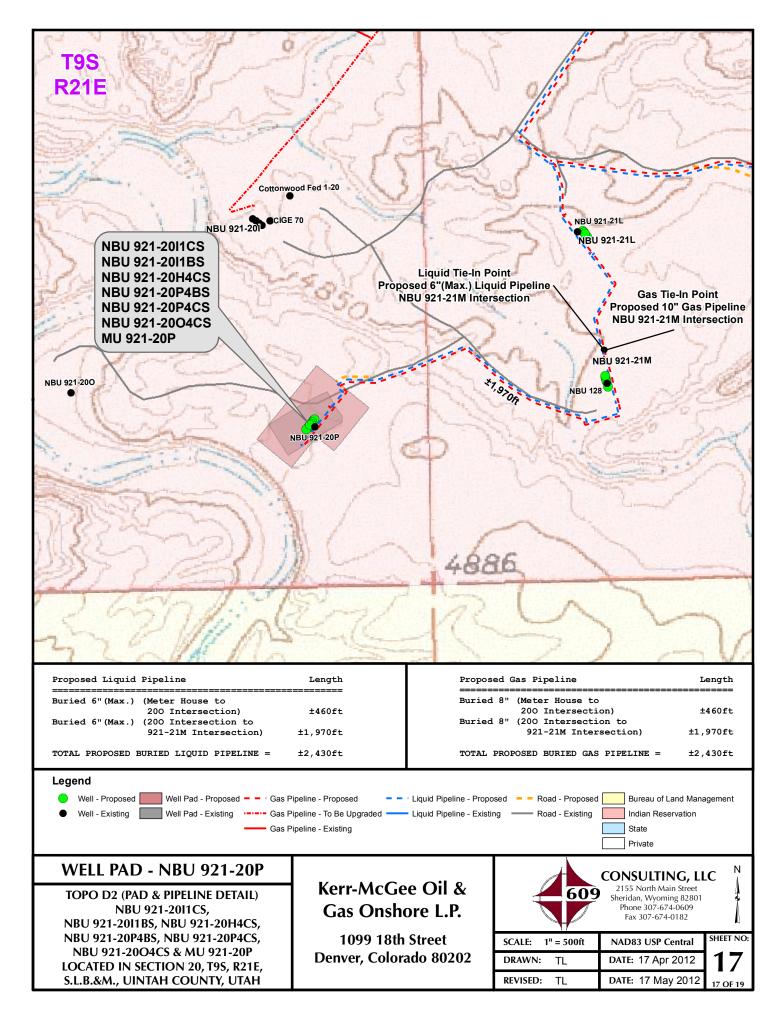
DATE PHOTOS TAKEN: 3-14-12	PHOTOS TAKEN BY: A.F.	SHEET NO:
DATE DRAWN: 3-22-12	DRAWN BY: T.J.R.	12
Date Last Revised: 5-16-12	T.J.R.	12 OF 19

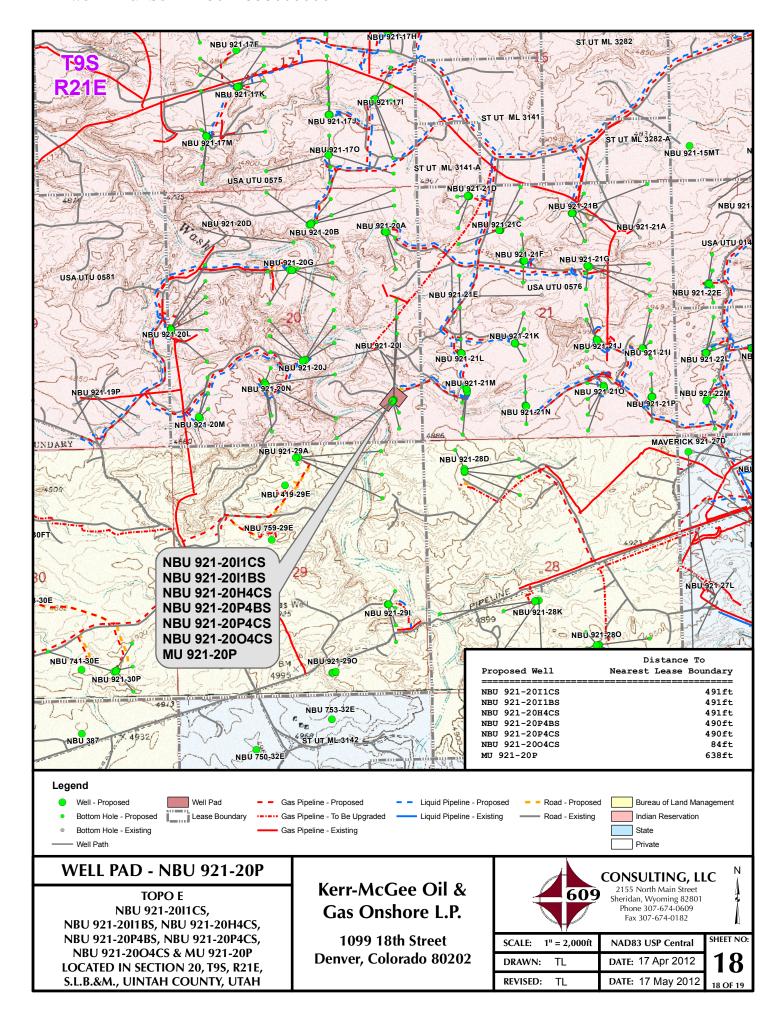












Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-20P WELLS - NBU 921-20I1CS, NBU 921-20I1BS, NBU 921-20H4CS, NBU 921-20P4BS, NBU 921-20P4CS, NBU 921-20O4CS & MU 921-20P Section 20, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 1.8 miles to a second Class D County Road to the north. Exit right and proceed in a northerly direction along the second Class D County Road approximately 2.3 miles to a Tribal Road to the southwest. Continue in a southwesterly, then northwesterly direction along the Tribal Road approximately 1.3 miles to a service road to the south. Exit left and proceed in a southerly, then southwesterly direction along the service road approximately 0.9 miles to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 0.1 miles to a third service road the southwest. Exit right and proceed in a southwesterly direction along the third service road approximately 0.1 miles to the proposed access road to the west. Follow road flags in westerly direction approximately 185 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.7 miles in a southerly direction.

SHEET 19 OF 19

API Well Number: 43047 5 to 3 co 6 OUTAB - UTM (feet), NAD27, Zone 12N

Scientific Drilling

Site: NBU 921-20P PAD Well: NBU 921-20O4CS

Wellbore: OH

Design: PLAN #1 PERMIT

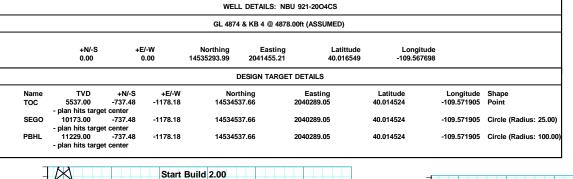


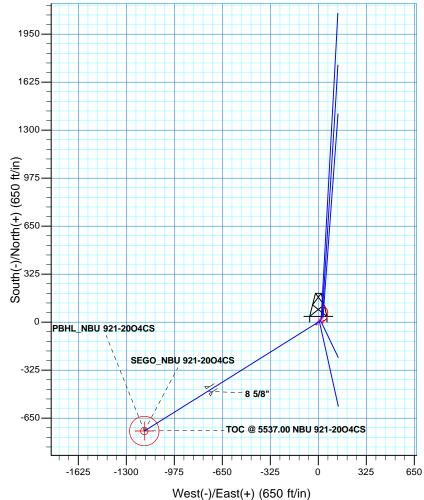


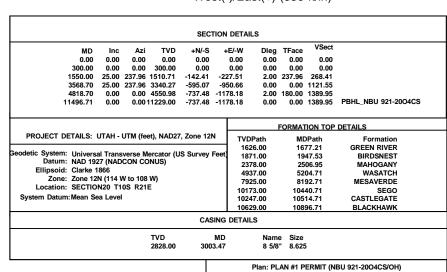
Azimuths to True North Magnetic North: 10.989

Magnetic Field Strength: 52232.1snT Dip Angle: 65.84° Date: 06/07/2012

Model: IGRF2010



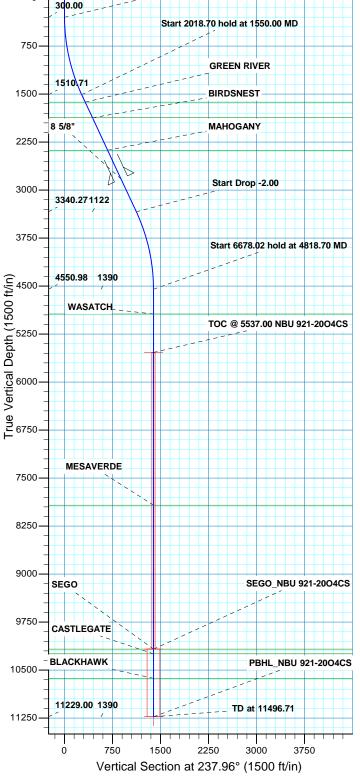




RECEIVED:

Created By: Gabe Kendall

Date: 14:12, June 07 2012



API Well Number: 43047533660000



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-20P PAD NBU 921-20O4CS

OH

Plan: PLAN #1 PERMIT

Standard Planning Report

07 June, 2012



API Well Number: 43047533660000



SDIPlanning Report



Database: EDM 5000.1 Single User Db

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20P PAD

 Well:
 NBU 921-2004CS

 Wellbore:
 OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20O4CS

GL 4874 & KB 4 @ 4878.00ft (ASSUMED) GL 4874 & KB 4 @ 4878.00ft (ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

 Geo Datum:
 NAD 1927 (NADCON CONUS)

 Map Zone:
 Zone 12N (114 W to 108 W)

Mean Sea Level

Site NBU 921-20P PAD, SECTION 20 T10S R21E

Northing: 14,535,333.11 usft Latitude: Site Position: 40.016655 From: Lat/Long Easting: 2,041,486.79 usft Longitude: -109.567583 **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.92 13.200 in

System Datum:

Well NBU 921-2004CS, 819 FSL 625 FEL

 Well Position
 +N/-S
 -38.61 ft
 Northing:
 14,535,293.99 usft
 Latitude:
 40.016549

 +E/-W
 -32.20 ft
 Easting:
 2,041,455.21 usft
 Longitude:
 -109.567698

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 4,874.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) 06/07/12 IGRF2010 10.98 65.84 52.232

PLAN #1 PERMIT Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 237.96

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,550.00	25.00	237.96	1,510.71	-142.41	-227.51	2.00	2.00	0.00	237.96	
3,568.70	25.00	237.96	3,340.27	-595.07	-950.66	0.00	0.00	0.00	0.00	
4,818.70	0.00	0.00	4,550.98	-737.48	-1,178.18	2.00	-2.00	0.00	180.00	
11,496.71	0.00	0.00	11,229.00	-737.48	-1,178.18	0.00	0.00	0.00	0.00 F	PBHL_NBU 921-200





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20P PAD

 Well:
 NBU 921-2004CS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20O4CS

GL 4874 & KB 4 @ 4878.00ft (ASSUMED) GL 4874 & KB 4 @ 4878.00ft (ASSUMED)

True

ign:	FLAN#IFER								
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00 100.00	0.00 0.00	0.00 0.00	0.00 100.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
200.00 300.00	0.00 0.00	0.00 0.00	200.00 300.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
Start Build	2.00								
400.00	2.00	237.96	399.98	-0.93	-1.48	1.75	2.00	2.00	0.00
500.00	4.00	237.96	499.84	-3.70	-5.92	6.98	2.00	2.00	0.00
600.00 700.00	6.00 8.00	237.96 237.96	599.45 698.70	-8.33 -14.79	-13.30 -23.63	15.69 27.88	2.00 2.00	2.00 2.00	0.00 0.00
800.00	10.00	237.96	797.47	-23.09	-36.89	43.52	2.00	2.00	0.00
900.00	12.00	237.96	895.62	-33.22	-53.06	62.60	2.00	2.00	0.00
1,000.00	14.00	237.96	993.06	-45.15	-72.13	85.10	2.00	2.00	0.00
1,100.00	16.00	237.96	1,089.64	-58.88	-94.07	110.98	2.00	2.00	0.00
1,200.00	18.00	237.96	1,185.27	-74.39	-118.85	140.21	2.00	2.00	0.00
1,300.00 1,400.00	20.00 22.00	237.96 237.96	1,279.82 1,373.17	-91.67 -110.68	-146.44 -176.82	172.77 208.60	2.00 2.00	2.00 2.00	0.00 0.00
1,500.00	24.00	237.96	1,465.21	-131.41	-209.94	247.67	2.00	2.00	0.00
1,550.00	25.00	237.96	1,510.71	-142.41	-227.51	268.41	2.00	2.00	0.00
Start 2018.7	70 hold at 1550.00	MD							
1,600.00 1,677.21	25.00 25.00	237.96 237.96	1,556.03 1,626.00	-153.62 -170.94	-245.42 -273.08	289.54 322.17	0.00 0.00	0.00 0.00	0.00 0.00
GREEN RIV	'ER								
1,700.00	25.00	237.96	1,646.66	-176.05	-281.25	331.80	0.00	0.00	0.00
1,800.00	25.00	237.96	1,737.29	-198.47	-317.07	374.06	0.00	0.00	0.00
1,900.00 1,947.53	25.00 25.00	237.96 237.96	1,827.92 1,871.00	-220.89 -231.55	-352.89 -369.92	416.32 436.41	0.00 0.00	0.00 0.00	0.00 0.00
BIRDSNES	Г								
2,000.00	25.00	237.96	1,918.55	-243.32	-388.71	458.59	0.00	0.00	0.00
2,100.00	25.00	237.96	2,009.18	-265.74	-424.54	500.85	0.00	0.00	0.00
2,200.00	25.00	237.96	2,099.81	-288.16	-460.36	543.11	0.00	0.00	0.00
2,300.00	25.00	237.96	2,190.44	-310.59	-496.18	585.37	0.00	0.00	0.00
2,400.00	25.00	237.96	2,281.07	-333.01	-532.00	627.63	0.00	0.00	0.00
2,500.00 2,506.95	25.00 25.00	237.96 237.96	2,371.70 2,378.00	-355.43 -356.99	-567.83 -570.32	669.90 672.83	0.00 0.00	0.00 0.00	0.00 0.00
MAHOGAN		231.30	2,010.00	-000.33	-510.52	012.00	0.00	0.00	0.00
2,600.00	25.00	237.96	2,462.34	-377.86	-603.65	712.16	0.00	0.00	0.00
2,700.00	25.00	237.96	2,552.97	-400.28	-639.47	754.42	0.00	0.00	0.00
2,800.00	25.00	237.96	2,643.60	-422.70	-675.30	796.68	0.00	0.00	0.00
2,900.00	25.00	237.96	2,734.23	-445.13	-711.12	838.94	0.00	0.00	0.00
3,000.00	25.00	237.96	2,824.86	-467.55	-746.94	881.20	0.00	0.00	0.00
3,003.47	25.00	237.96	2,828.00	-468.33	-748.18	882.67	0.00	0.00	0.00
8 5/8"	05.00	227.00	2.045.40	400.07	700.70	000.47	0.00	0.00	0.00
3,100.00 3,200.00	25.00 25.00	237.96 237.96	2,915.49 3,006.12	-489.97 -512.40	-782.76 -818.59	923.47 965.73	0.00 0.00	0.00 0.00	0.00 0.00
3,300.00	25.00 25.00	237.96	3,006.12	-512.40 -534.82	-818.59 -854.41	1,007.99	0.00	0.00	0.00
3,400.00	25.00 25.00	237.96	3,187.38	-557.24	-890.23	1,007.99	0.00	0.00	0.00
3,500.00	25.00	237.96	3,278.01	-579.66	-926.05	1,092.51	0.00	0.00	0.00
3,568.70	25.00	237.96	3,340.27	-595.07	-950.66	1,121.55	0.00	0.00	0.00
Start Drop		007.00	0.000.74	000.04	004 74	4 40 4 00	2.22	2.22	2.22
3,600.00	24.37	237.96	3,368.71	-602.01	-961.74	1,134.62	2.00	-2.00	0.00
3,700.00	22.37	237.96	3,460.50	-623.05	-995.37 1.026.26	1,174.29	2.00	-2.00 2.00	0.00
3,800.00	20.37	237.96	3,553.62	-642.39	-1,026.26	1,210.74	2.00	-2.00	0.00
3,900.00	18.37	237.96	3,647.95	-659.99	-1,054.38	1,243.91	2.00	-2.00	0.00





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20P PAD

 Well:
 NBU 921-2004CS

ОН

Wellbore:

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20O4CS

GL 4874 & KB 4 @ 4878.00ft (ASSUMED) GL 4874 & KB 4 @ 4878.00ft (ASSUMED)

True

yıı.	FLAN#IFLI								
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	16.37	237.96	3,743.39	-675.83	-1,079.69	1,273.77	2.00	-2.00	0.00
4,100.00	14.37	237.96	3,839.80	-689.90	-1,102.16	1,300.28	2.00	-2.00	0.00
4,200.00	12.37	237.96	3,937.09	-702.17	-1,121.77	1,323.41	2.00	-2.00	0.00
4,300.00	10.37	237.96	4,035.12	-712.63	-1,138.48	1,343.13	2.00	-2.00	0.00
4,400.00	8.37	237.96	4,133.78	-721.28	-1,152.29	1,359.41	2.00	-2.00	0.00
4,500.00	6.37	237.96	4,232.95	-728.08	-1,163.16	1,372.25	2.00	-2.00	0.00
4,600.00	4.37	237.96	4,332.50	-733.05	-1,171.10	1,381.61	2.00	-2.00	0.00
4,700.00	2.37	237.96	4,432.32	-736.18	-1,176.09	1,387.50	2.00	-2.00	0.00
4,800.00	0.37	237.96	4,532.29	-737.45	-1,178.12	1,389.89	2.00	-2.00	0.00
4,818.70	0.00	0.00	4,550.98	-737.48	-1,178.18	1,389.95	2.00	-2.00	0.00
Start 6678.02	2 hold at 4818.70	D MD							
4,900.00	0.00	0.00	4,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,000.00	0.00	0.00	4,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,100.00	0.00	0.00	4,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,200.00	0.00	0.00	4,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,204.71	0.00	0.00	4,937.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
WASATCH			,		,	,			
5,300.00	0.00	0.00	5,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,400.00	0.00	0.00	5,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,500.00	0.00	0.00	5,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,600.00	0.00	0.00	5,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
5,700.00	0.00	0.00	5,432.29 5,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00 0.00	0.00
5,800.00 5,804.71	0.00 0.00	0.00 0.00	5,537.00	-737.48 -737.48	-1,178.18 -1,178.18	1,389.95 1,389.95	0.00 0.00	0.00	0.00 0.00
	.00 NBU 921-20		3,337.00	-737.40	-1,170.10	1,309.93	0.00	0.00	0.00
5,900.00	0.00	0.00	5,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,000.00	0.00	0.00	5,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,100.00	0.00	0.00	5,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,200.00	0.00	0.00	5,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,300.00	0.00	0.00	6,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,400.00	0.00	0.00	6,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,500.00	0.00	0.00	6,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,600.00	0.00	0.00	6,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,700.00	0.00	0.00	6,432.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,800.00	0.00	0.00	6,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
6,900.00	0.00	0.00	6,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,000.00	0.00	0.00	6,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,100.00	0.00	0.00	6,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,200.00	0.00	0.00	6,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,300.00	0.00	0.00	7,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,400.00	0.00	0.00	7,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,500.00	0.00	0.00	7,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,600.00	0.00	0.00	7,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,700.00	0.00	0.00	7,432.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,800.00	0.00	0.00	7,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
7,900.00	0.00	0.00	7,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,000.00	0.00	0.00	7,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,100.00	0.00	0.00	7,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,192.71	0.00	0.00	7,925.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
MESAVERDI			,	, .	,	,			
8,200.00	0.00	0.00	7,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,300.00	0.00	0.00	8,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,400.00	0.00	0.00	8,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-20P PAD

 Well:
 NBU 921-2004CS

Wellbore: OH

Design: PLAN #1 PERMIT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-20O4CS

GL 4874 & KB 4 @ 4878.00ft (ASSUMED) GL 4874 & KB 4 @ 4878.00ft (ASSUMED)

True

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,500.00	0.00	0.00	8,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,600.00	0.00	0.00	8,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,700.00	0.00	0.00	8,432.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,800.00	0.00	0.00	8,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
8,900.00	0.00	0.00	8,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,000.00	0.00	0.00	8,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,100.00	0.00	0.00	8,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,200.00	0.00	0.00	8,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,300.00	0.00	0.00	9,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,400.00	0.00	0.00	9,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,500.00	0.00	0.00	9,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,600.00	0.00	0.00	9,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,700.00	0.00	0.00	9,432.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,800.00	0.00	0.00	9,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
9,900.00	0.00	0.00	9,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,000.00	0.00	0.00	9.732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,100.00	0.00	0.00	9,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,200.00	0.00	0.00	9,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,300.00	0.00	0.00	10,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,400.00	0.00	0.00	10,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,440.71	0.00	0.00	10,173.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
SEGO - SEG	O_NBU 921-20C	4CS	,		,	,			
10,500.00	0.00	0.00	10,232.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,514.71	0.00	0.00	10,247.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
CASTLEGAT	Έ								
10,600.00	0.00	0.00	10,332.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,700.00	0.00	0.00	10,432.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,800.00	0.00	0.00	10,532.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
10,896.71	0.00	0.00	10,629.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
BLACKHAW									
10,900.00	0.00	0.00	10,632.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,000.00	0.00	0.00	10,732.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,100.00	0.00	0.00	10,832.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,200.00	0.00	0.00	10,932.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,300.00	0.00	0.00	11,032.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,400.00	0.00	0.00	11,132.29	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00
11,496.71	0.00	0.00	11,229.00	-737.48	-1,178.18	1,389.95	0.00	0.00	0.00





EDM 5000.1 Single User Db Database: Company: Project:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-20P PAD Site: Well: NBU 921-20O4CS

Wellbore: ОН

Design: PLAN #1 PERMIT Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-20O4CS

GL 4874 & KB 4 @ 4878.00ft (ASSUMED) GL 4874 & KB 4 @ 4878.00ft (ASSUMED)

True

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TOC @ 5537.00 NBU 92 - plan hits target cen - Point	0.00 ter	0.00	5,537.00	-737.48	-1,178.18	14,534,537.67	2,040,289.04	40.014524	-109.571905
SEGO_NBU 921-20O4C - plan hits target cen - Circle (radius 25.00		0.00	10,173.00	-737.48	-1,178.18	14,534,537.67	2,040,289.04	40.014524	-109.571905
PBHL_NBU 921-20O4C - plan hits target cen - Circle (radius 100.0		0.00	11,229.00	-737.48	-1,178.18	14,534,537.67	2,040,289.04	40.014524	-109.571905

Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth	Depth		Diameter	Diameter	
	(ft)	(ft)	Name	(in)	(in)	
	3,003.47	2,828.00 8 5/8"		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,677.21	1,626.00	GREEN RIVER				
	1,947.53	1,871.00	BIRDSNEST				
	2,506.95	2,378.00	MAHOGANY				
	5,204.71	4,937.00	WASATCH				
	8,192.71	7,925.00	MESAVERDE				
	10,440.71	10,173.00	SEGO				
	10,514.71	10,247.00	CASTLEGATE				
	10,896.71	10,629.00	BLACKHAWK				

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,550.00	1,510.71	-142.41	-227.51	Start 2018.70 hold at 1550.00 MD
3,568.70	3,340.27	-595.07	-950.66	Start Drop -2.00
4,818.70	4,550.98	-737.48	-1,178.18	Start 6678.02 hold at 4818.70 MD
11,496.71	11,229.00	-737.48	-1,178.18	TD at 11496.71

Surface Use Plan of Operations 1 of 12

MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P.

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-20P Pad

<u>API #</u>	MU 921-20P	<u>_</u>	
Surface	: 804 FSL / 638 FEL	SESE	Lot
BHL	: 804 FSL / 638 FEL	SESE	Lot
API#	NBU 921-20H4CS	_	
Surface	: 842 FSL / 606 FEL	SESE	Lot
BHL	: 2397 FNL / 491 FEL	SENE	Lot
<u>API #</u>	NBU 921-2011BS	_	
Surface	: 850 FSL / 599 FEL	SESE	Lot
BHL	: 2559 FSL / 491 FEL	NESE	Lot
<u>API #</u>	NBU 921-2011CS		
Surface	: 857 FSL / 593 FEL	SESE	Lot
BHL	: 2229 FSL / 491 FEL	NESE	Lot
<u>API #</u>	NBU 921-2004CS		
Surface	: 819 FSL / 625 FEL	SESE	Lot
BHL	: 84 FSL / 1804 FEL	SWSE	Lot
<u>API #</u>	NBU 921-20P4BS		
Surface	: 834 FSL / 612 FEL	SESE	Lot
BHL	: 579 FSL / 490 FEL	SESE	Lot
API #	NBU 921-20P4CS		
Surface	: 827 FSL / 618 FEL	SESE	Lot
BHL	: 249 FSL / 490 FEL	SESE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 8, 2012. Present were:

- · David Gordon, Melissa Wardle, Tyler Cox BLM;
- Bucky Secakuku BIA;
- Brad Pinecoose Ute Indian Tribe;
- · Amy Ackman Montgomery Archeological Consultants Inc.;
- Scott Carson Smiling Lake Consulting;
- · John Slaugh, Mitch Batty Timberline Engineering & Land Surveying, Inc.;
- Danielle Piernot, Raleen White, Doyle Holmes, Rod Anderson, Charles Chase Kerr-McGee
- · Tim Horgan-Kobelski Grasslands Consulting, Inc.
- Justin Strauss SWCA Environmental Consultants

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

Surface Use Plan of Operations 2 of 12

MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P.

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

 $\pm 185'$ (0.04 miles) – Section 20 (SE/4 SE/4) T9S R21E – On lease UTU0575 Ute Indian Tribe surface, road re-route from the edge of the pad to the existing road to the north. Please refer to Topo B.

C. Location of Existing Wells:

A) Refer to Topo Map C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 921-20P, which is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records on June 28, 2012. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is $\pm 2,430$ ° and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

 $\pm 2,430$ ' (0.5 miles) – Section 20 and Section 21 T9S R21E– On-lease UTU0575 and UTU0576 Ute Indian Tribe Surface, New 8" buried gas gathering pipeline from the meter to the NBU 921-21M Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 2,430^{\circ}$ and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

 $\pm 2,430^{\circ}$ (0.5 miles) – Section 20 and Section 21 T9S R21E– On-lease UTU0575 and UTU0576 Ute Indian Tribe Surface. New 6" buried liquid gathering pipeline from the separator to the NBU 921-21M Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

Surface Use Plan of Operations 4 of 12

MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P.

Pipeline Gathering Construction

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

API Well Number: 43047533660000

MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P. Surface Use Plan of Operations 5 of 12

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the Vernal BIA Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.

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MU 921-20P/ NBU 921-20H4CS/ 921-20I1BS/ 921-20I1CS NBU 921-20O4CS/ 921-20P4BS/ 921-20P4CS Kerr-McGee Oil Gas Onshore, L.P.

E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Tribal lands without prior approval from the BIA. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BIA.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BIA, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BIA, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc.). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BIA. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BIA.

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Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

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RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E Bonanza Evaporation Pond in Sec. 2 T10S R23E

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

H. Ancillary Facilities:

ancillary facilities are

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BIA.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BIA for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

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Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BIA will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BIA/Tribe. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications as proposed below in "Measures Common to Interim and Final Reclamation".

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BIA/Tribe.

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for

re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

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Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Indian Ricegrass (Nezpar)	3
Sandberg Bluegrass	0.75
Bottlebrush Squirreltail	1
Great Basin Wildrye	0.5
Crested Wheatgrass	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing Saltbrush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Weed Control

Noxious weeds will be controlled in akk orihect areas un accordance with all applicable rules and regulations.

K. Surface/Mineral Ownership:

Ute Indian Tribe
P.O. Box 70
Bureau of Land Management
988 South 7500 East Annex Building
Fort Duschesne, UT 84026
(435) 722-4307
United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

L. Other Information:

Onsite Specifics:

No changes

Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BIA.

Resource Reports:

A Class I literature survey report was completed on May 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-152.

A paleontological reconnaissance survey was completed on April 10-16, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-105 and UT12-14314-122.

Biological field survey was completed on April 10-13, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-775 and GCI-776.

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Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year) ¹					
Pollutant	Development	Production	Total		
NOx	3.8	0.12	3.92		
CO	2.2	0.11	2.31		
VOC	0.1	4.9	5		
SO ₂	0.005	0.0043	0.0093		
PM_{10}	1.7	0.11	1.81		
PM _{2.5}	0.4	0.025	0.425		
Benzene	2.2E-03	0.044	0.046		
Toluene	1.6E-03	0.103	0.105		
Ethylbenzene	3.4E-04	0.005	0.005		
Xylene	1.1E-03	0.076	0.077		
n-Hexane	1.7E-04	0.145	0.145		
Formaldehyde	1.3E-02	8.64E-05	1.31E-02		

¹ Emissions include 1 producing well and associated operations traffic during the year in

which the project is developed

Table 2:	Proposed Action versus 201 Inventory Com		Emissions
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory ^a (ton/yr)	to WRAP Phase
NOx	27.44	16,547	0.17%
VOC	35	127,495	0.03%

^a http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

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M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

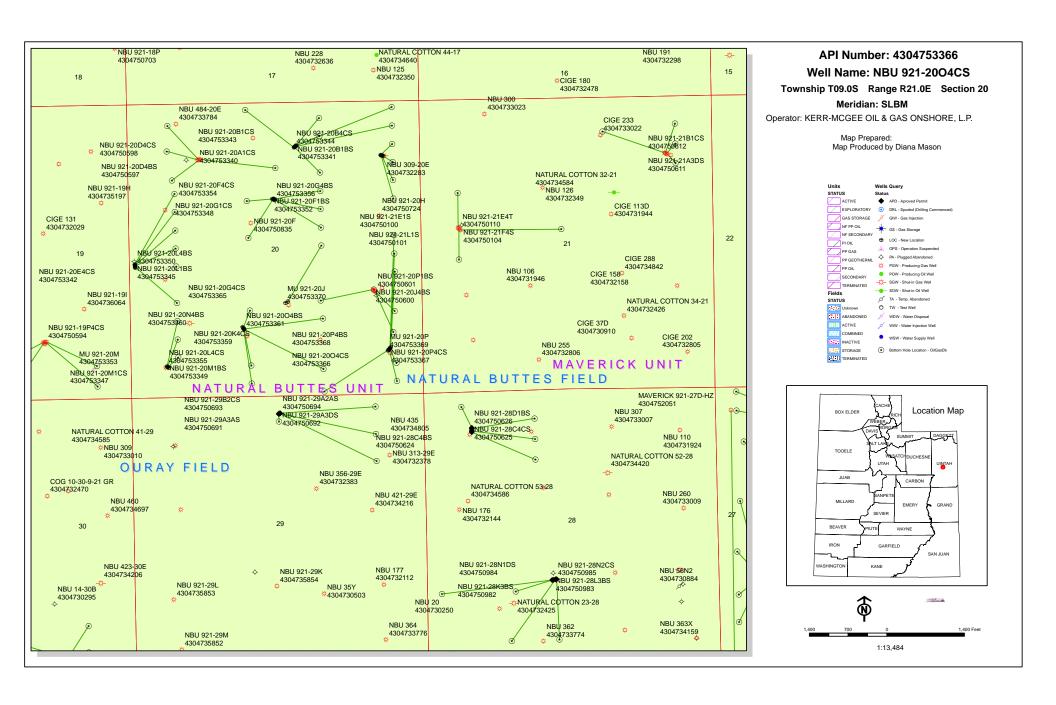
The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

	July 12, 2012
Danielle Piernot	Date



API Well Number: 43047533660000

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

December 6, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-20A PAD

BHL Sec 20 T09S R21E 0744 FNL 0491 FEL 43-047-53331 NBU 921-20A4CS Sec 20 T09S R21E 0951 FNL 0678 FEL BHL Sec 20 T09S R21E 1075 FNL 0491 FEL 43-047-53334 NBU 921-20H1BS Sec 20 T09S R21E 0950 FNL 0688 FEL BHL Sec 20 T09S R21E 1405 FNL 0491 FEL 43-047-53335 NBU 921-20H1CS Sec 20 T09S R21E 0948 FNL 0698 FEL BHL Sec 20 T09S R21E 1736 FNL 0491 FEL NBU 921-20L PAD 43-047-53333 NBU 921-20E1BS Sec 20 T09S R21E 2450 FSL 0075 FWL BHL Sec 20 T09S R21E 1571 FNL 0819 FWL 43-047-53336 NBU 921-20E1CS Sec 20 T09S R21E 2440 FSL 0076 FWL BHL Sec 20 T09S R21E 1902 FNL 0819 FWL 43-047-53339 NBU 921-20E4BS Sec 20 T09S R21E 2430 FSL 0077 FWL BHL Sec 20 T09S R21E 2233 FNL 0819 FWL 43-047-53342 NBU 921-20E4CS Sec 20 T09S R21E 2420 FSL 0078 FWL BHL Sec 20 T09S R21E 2564 FNL 0819 FWL Sec 20 T09S R21E 2410 FSL 0079 FWL 43-047-53345 NBU 921-20L1BS BHL Sec 20 T09S R21E 2396 FSL 0819 FWL BHL Sec 20 T09S R21E 1736 FSL 0818 FWL

RECEIVED: December 06, 2012

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-20B I		921-20C1BS	SAC	20	T095	R21F	0777	FNT.	2269	FFI.
43-047-33337	NDO	BHL	Sec	20	T09S	R21E	0083	FNL	2136	FWL
43-047-53338	NBU	921-20A1BS BHL								
43-047-53340	NBU	921-20A1CS BHL								
43-047-53341	NBU	921-20B1BS BHL								
43-047-53343	NBU	921-20B1CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0738 0578	FNL FNL	2223 1808	FEL FEL
43-047-53344	NBU	921-20B4CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0771 1240	FNL FNL	2261 1807	FEL FEL
NBU 921-20G I 43-047-53346	P AD NBU	921-20G1BS BHL	Sec	20	T09S	R21E	1706	FNL	2606	FWL
43-047-53348	NBU	921-20G1CS BHL								
43-047-53352	NBU	921-20F1BS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	1702 1732	FNL FNL	2587 2126	FWL FWL
43-047-53354	NBU	921-20F4CS BHL								
43-047-53356	NBU	921-20G4BS BHL	Sec Sec	20	T09S T09S	R21E R21E	1710 2232	FNL FNL	2626 1806	FWL FEL
43-047-53347	NBU	921-20M1CS BHL	Sec	20	T09S	R21E	0575	FSL	0625	FWL
43-047-53349	NBU	921-20M1BS BHL								
43-047-53355	NBU	921-20L4CS BHL	Sec Sec	20 20	T09S T09S	R21E R21E	0587 1406	FSL FSL	0609 0818	FWL FWL
NBU 921-20N 1 43-047-53351	P AD NBU	921-20N4CS	Sec	20	T09S	R21E R21E	1256	FSL	2008	FWL
43-047-53358	NBU	921-20J4CS BHL				R21E R21E				
43-047-53359	NBU	921-20K4CS BHL				R21E R21E				
43-047-53360	NBU	921-20N4BS BHL				R21E R21E				
43-047-53361	NBU	921-2004BS BHL				R21E R21E				

API Well Number: 43047533660000

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE) NBU 921-20P PAD BHL Sec 20 T09S R21E 2397 FNL 0491 FEL 43-047-53363 NBU 921-20I1BS Sec 20 T09S R21E 0850 FSL 0599 FEL BHL Sec 20 T09S R21E 2559 FSL 0491 FEL BHL Sec 20 T09S R21E 2229 FSL 0491 FEL BHL Sec 20 T09S R21E 0084 FSL 1804 FEL BHL Sec 20 T09S R21E 0249 FSL 0490 FEL 43-047-53368 NBU 921-20P4BS Sec 20 T09S R21E 0834 FSL 0612 FEL BHL Sec 20 T09S R21E 0579 FSL 0490 FEL NBU 921-20J PAD 43-047-53365 NBU 921-20G4CS Sec 20 T09S R21E 1726 FSL 2431 FEL BHL Sec 20 T09S R21E 2563 FNL 1806 FEL

Michael L. Coulthard Digitally signed by Michael L. coulthard Digitally signed by Michael L. coulthard or Diverse of Land Management, ou-Branch of District Diverse of Land Management, ou-Branch of District Division State 2012;12(69):94543-97070

bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:12-6-12

Page 3

API Number	Well Name		Surface	Location
43-047-53330	NBU 921-20A4BS	Sec 20	T09S R21E	0947 FNL 0708 FEL
43-047-53331	NBU 921-20A4CS	Sec 20	T09S R21E	0951 FNL 0678 FEL
43-047-53333	NBU 921-20E1BS	Sec 20	T09S R21E	2450 FSL 0075 FWL
43-047-53334	NBU 921-20H1BS	Sec 20	T09S R21E	0950 FNL 0688 FEL
43-047-53335	NBU 921-20H1CS	Sec 20	T09S R21E	0948 FNL 0698 FEL
43-047-53336	NBU 921-20E1CS	Sec 20	T09S R21E	2440 FSL 0076 FWL
43-047-53337	NBU 921-20C1BS	Sec 20	T09S R21E	0777 FNL 2269 FEL
43-047-53338	NBU 921-20A1BS	Sec 20	T09S R21E	0745 FNL 2231 FEL
43-047-53339	NBU 921-20E4BS	Sec 20	T09S R21E	2430 FSL 0077 FWL
43-047-53340	NBU 921-20A1CS	Sec 20	T09S R21E	0764 FNL 2253 FEL
43-047-53341	NBU 921-20B1BS	Sec 20	T09S R21E	0751 FNL 2238 FEL
43-047-53342	NBU 921-20E4CS	Sec 20	T09S R21E	2420 FSL 0078 FWL
43-047-53343	NBU 921-20B1CS	Sec 20	T09S R21E	0738 FNL 2223 FEL
43-047-53344	NBU 921-20B4CS	Sec 20	T09S R21E	0771 FNL 2261 FEL
43-047-53345	NBU 921-20L1BS	Sec 20	T09S R21E	2410 FSL 0079 FWL
43-047-53346	NBU 921-20G1BS	Sec 20	T09S R21E	1706 FNL 2606 FWL
43-047-53347	NBU 921-20M1CS	Sec 20	T09S R21E	0575 FSL 0625 FWL
43-047-53348	NBU 921-20G1CS	Sec 20	T09S R21E	1712 FNL 2636 FWL
43-047-53349	NBU 921-20M1BS	Sec 20	T09S R21E	0581 FSL 0617 FWL
43-047-53350	NBU 921-20L4BS	Sec 20	T09S R21E	2401 FSL 0080 FWL
43-047-53351	NBU 921-20N4CS	Sec 20	T09S R21E	1256 FSL 2008 FWL
43-047-53352	NBU 921-20F1BS	Sec 20	T09S R21E	1702 FNL 2587 FWL
43-047-53354	NBU 921-20F4CS	Sec 20	T09S R21E	1704 FNL 2597 FWL
43-047-53355	NBU 921-20L4CS	Sec 20	T09S R21E	0587 FSL 0609 FWL
43-047-53356	NBU 921-20G4BS	Sec 20	T09S R21E	1710 FNL 2626 FWL
43-047-53358	NBU 921-20J4CS	Sec 20	T09S R21E	1239 FSL 2019 FWL
43-047-53359	NBU 921-20K4CS	Sec 20	T09S R21E	1265 FSL 2003 FWL
43-047-53360	NBU 921-20N4BS	Sec 20	T09S R21E	1248 FSL 2014 FWL
43-047-53361	NBU 921-2004BS	Sec 20	T09S R21E	1231 FSL 2024 FWL
43-047-53362	NBU 921-20H4CS	Sec 20	T09S R21E	0842 FSL 0606 FEL
43-047-53363	NBU 921-20I1BS	Sec 20	T09S R21E	0850 FSL 0599 FEL
43-047-53364	NBU 921-20I1CS	Sec 20	T09S R21E	0857 FSL 0593 FEL
43-047-53365	NBU 921-20G4CS	Sec 20	T09S R21E	1726 FSL 2431 FEL
43-047-53366	NBU 921-2004CS	Sec 20	T09S R21E	0819 FSL 0625 FEL
43-047-53367	NBU 921-20P4CS	Sec 20	T09S R21E	0827 FSL 0618 FEL
43-047-53368	NBU 921-20P4BS	Sec 20	T09S R21E	0834 FSL 0612 FEL

API Well Number: 43047533660000

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/27/2012 API NO. ASSIGNED: 43047533660000

WELL NAME: NBU 921-2004CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6029

CONTACT: Cara Mahler

PROPOSED LOCATION: SESE 20 090S 210E **Permit Tech Review:**

> **SURFACE: 0819 FSL 0625 FEL Engineering Review:**

> **BOTTOM:** 0084 FSL 1804 FEL **Geology Review:**

COUNTY: UINTAH

LATITUDE: 40.01647 LONGITUDE: -109.56836 UTM SURF EASTINGS: 622177.00 NORTHINGS: 4430567.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE **LEASE NUMBER: UTU**0575

SURFACE OWNER: 2 - Indian **COALBED METHANE: NO**

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

Potash R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit**

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting Fee Surface Agreement

✓ Intent to Commingle R649-3-11. Directional Drill

Commingling Approved

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-2004CS **API Well Number:** 43047533660000

Lease Number: UTU0575 Surface Owner: INDIAN Approval Date: 12/10/2012

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
 - Requests to Change Plans (Form 9) due prior to implementation
 - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007) RECEITED

AUG 23 2012

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DEPARTMENT OF THE INTERIOR

5. Lease Serial No.

	DENVEYOR UN	11100010	
APPLICATION FOR PERMIT	TO DRILL OR REENTER	6. If Indian, Allottee or Tribe	Name
la. Type of Work: 🗖 DRILL 🔲 REENTER	7. If Unit or CA Agreement, Name and No. UTU63047A		
1b. Type of Well: ☐ Oil Well Gas Well ☐ Ot	her Single Zone Multiple Zone	8. Lease Name and Well No. NBU 921-2004CS	
	DANIELLE PIERNOT	9. API Well No. 43 047 53366	2
3a. Address PO BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	10. Field and Pool, or Explora NATURAL BUTTES	
4. Location of Well (Report location clearly and in accorded	nnce with any State requirements.*)	11. Sec., T., R., M., or Blk. an	d Survey or Area
At surface SESE 819FSL 625FEL 40	.016514 N Lat, 109.568387 W Lon	Sec 20 T9S R21E Mer	r SLB
At proposed prod. zone SWSE 84FSL 1804FEL 40	.014489 N Lat, 109.572594 W Lon		
14. Distance in miles and direction from nearest town or post APPROXIMATELY 48 MILES SOUTH OF VER		12. County or Parish UINTAH COUNTY	13. State UT
 Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 84' 	17. Spacing Unit dedicated to	this well	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file	
942'	11497 MD 11229 TVD	WYB000291	
21. Elevations (Show whether DF, KB, RT, GL, etc. 4874 GL	22. Approximate date work will start 02/01/2013	23. Estimated duration 60-90 DAYS	
	24. Attachments		
The following, completed in accordance with the requirements of	f Onshore Oil and Gas Order No. 1, shall be attached to the	nis form:	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Off 	Item 20 above). Em Lands, the 5. Operator certification	ns unless covered by an existing bormation and/or plans as may be	
25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE PIERNOT Ph: 720-929-6156		Date 07/13/2012
Title REGULATORY ANALYST II			
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka		Date 1 9 2013
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	-	
Application approval does not warrant or certify the applicant ho perations thereon. Conditions of approval, if any, are attached.		se which would entitle the applic	
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, n	nake it a crime for any person knowingly and willfully to	make to any department or agenc	y of the United

Additional Operator Remarks (see next page)

RECEIVED

Electronic Submission #142917 verified by the BLM Well Information System For KERR MCGEE OiL&GAS ONSHORE, LP, sent to the Vernal

JUN 2 5 2013

NOTICE OF APPROVAL

UDOG NV. OF OIL, GAS & MINING

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

12 RRH 279675

NOS-4/25/12.



UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

KERR MCGEE OIL& GAS ON SHORE

Location: Lease No: SESE, Sec. 20, T9S, R21E

NBU 921-2004CS

Agreement:

UTU-0575

API No: 43-047-53366

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 6 Well: NBU 921-20O4CS 6/10/2013

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
 work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
 mitigation may be necessary for the discovered paleontologic material before construction can
 continue.

NBU 921-20P Well Pad

- 1. Paint facilities "Shadow Gray."
- 2. Conduct a raptor survey prior to construction operations if such activities would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during the survey, operations should be conducted according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines.
- 3. If construction operations are not initiated prior to April 11, 2013, an additional biological survey for Uinta Basin hookless cactus should be conducted prior to construction according to current USFWS protocol.
- 4. Monitor construction with a permitted archaeologist.
- 5. Monitor access road, well pad, and pipeline construction with a permitted paleontologist.
- 6. Contact Questar Pipeline to maintain required separation between existing pipeline and NBU 921-20P pipeline.

Page 3 of 6 Well: NBU 921-2004CS 6/10/2013

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.
- Cement for the surface casing will be circulated to the surface.

Variances Granted

All variances approved as written in APD.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
 encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
 Field Office.

Page 4 of 6 Well: NBU 921-20O4CS 6/10/2013

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
 Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well by CD (compact disc). This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 921-2004CS 6/10/2013

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written communication
 and must be received in this office by not later than the fifth business day following the date on
 which the well is placed on production. The notification shall provide, as a minimum, the following
 informational items:
 - o Operator name, address, and telephone number.
 - o Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - o Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

Page 6 of 6 Well: NBU 921-20O4CS 6/10/2013

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
 Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
 future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
 BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
 hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
 be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
 lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
 suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
 obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior approval
 of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
 approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
 of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
 Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
 order that a representative may witness plugging operations. If a well is suspended or abandoned,
 all pits must be fenced immediately until they are backfilled. The "Subsequent Report of
 Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of
 the well bore, showing location of plugs, amount of cement in each, and amount of casing left in
 hole, and the current status of the surface restoration.

Sundry Number: 43828 API Well Number: 43047533660000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: THE UT		
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-2004CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047533660000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 7 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 21.0E Merid	lian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 10/14/2013	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
10/14/2013	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date.		STA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION	□ OTHER	OTHER:
Spud well 10/14/20 ² X .250 wall co	COMPLETED OPERATIONS. Clearly show 13 @ 12:00. Drill 24" condunductor pipe, cement with 8 spud date and surface cas	uctor hole to 40', run 14" 31 sacks ready mix.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 16, 2013
NAME (PLEASE PRINT)	PHONE NUME		
Doreen Green	435 781-9758	Regulatory Analyst II	
SIGNATURE N/A		DATE 10/16/2013	

Sundry Number: 43851 API Well Number: 43047533660000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575
SUNDR	RY NOTICES AND REPORTS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: THE UT	
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-2004CS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047533660000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	PHONE NUMBER: 73779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 21.0E Meridi	an: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
✓ NOTICE OF INTENT	ACIDIZE	ALTER CASING	CASING REPAIR
Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
12/10/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION
· ·	WILDCAT WELL DETERMINATION	OTHER	OTHER:
Kerr-McGee Oil & G an extension to this	completed operations. Clearly show a cas Onshore, L.P. (Kerr-McGe APD for the maximum time with any questions and/or co	ee) respectfully requests allowed. Please contact	Approved by the
NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMB 720 929 6582	ER TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 10/16/2013	

Sundry Number: 43851 API Well Number: 43047533660000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047533660000

API: 43047533660000 Well Name: NBU 921-2004CS

Location: 0819 FSL 0625 FEL QTR SESE SEC 20 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/10/2012

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
• Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? (Yes (No
• Has the approved source of water for drilling changed? 🔘 Yes 🌘 No
• Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? Yes No
nature: Kay E. Kelly Date: 10/16/2013

Sig

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Sundry Number: 49385 API Well Number: 43047533660000

	STATE OF UTAH			FORM 9		
[DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		6	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE					
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-2004CS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047533660000					
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 1NATERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL				COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 20	STATE: UTAH					
11. CHECI	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION			TYPE OF ACTION			
	ACIDIZE		ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	NEW CONSTRUCTION		
	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR		VENT OR FLARE	WATER DISPOSAL		
✓ DRILLING REPORT	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION		
Report Date: 4/1/2014						
	WILDCAT WELL DETERMINATION		OTHER	OTHER:		
	completed operations. Clearly sho			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY April 01, 2014		
NAME (PLEASE PRINT) Teena Paulo	PHONE NUI 720 929-6236	MBER	TITLE Staff Regulatory Specialist			
SIGNATURE			DATE 4/1/2014			
N/A			4/1/2014			

Sundry Number: 52425 API Well Number: 43047533660000

	FORM 9							
	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		3	5.LEASE DESIGNA UTU0575	TION AND SERIAL NUMBER:			
SUNDR	6. IF INDIAN, ALLO	OTTEE OR TRIBE NAME:						
	oposals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20O4CS							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047533660000							
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	9. FIELD and POO 110.ATUERAL BUTTI							
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL	COUNTY: UINTAH							
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 2	STATE: UTAH							
11. CHEC	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER D	ATA			
TYPE OF SUBMISSION			TYPE OF ACTION					
	ACIDIZE		ALTER CASING	CASING REF	PAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WE	ELL NAME			
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT W	ELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	NEW CONS	TRUCTION			
	OPERATOR CHANGE	i	PLUG AND ABANDON	PLUG BACK				
SPUD REPORT	PRODUCTION START OR RESUME	ı	RECLAMATION OF WELL SITE	RECOMPLE	TE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORAR	Y ABANDON			
	TUBING REPAIR		/ENT OR FLARE	WATER DISE	POSAL			
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTEN	SION			
6/24/2014	WILDCAT WELL DETERMINATION		OTHER	OTHER:				
	completed operations. Clearly showed to 10,325 ft. in Quarter	-	_	Accepto Utah D Oil, Gas a	ed by the ivision of and Mining			
NAME (PLEASE PRINT) Ila Beale	PHONE NUN 720 929-6408	IBER	TITLE Staff Reg. Specialist					
SIGNATURE			DATE					
N/A			6/24/2014					

RECEIVED: Jun. 24, 2014

Sundry Number: 55502 API Well Number: 43047533660000

	07475.05.07411		FORM 9			
	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES	3				
1	NG	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575				
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE					
	oposals to drill new wells, significantly de reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-2004CS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047533660000					
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	P h Street, Suite 600, Denver, CO, 80217 3	HONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 1NATERAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 2	HIP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
✓ DRILLING REPORT		1	APD EXTENSION			
Report Date: 9/12/2014	│	SI TA STATUS EXTENSION	APD EXTENSION			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
Started o	COMPLETED OPERATIONS. Clearly show all completing the well. Well TD a	t 10,325 ft.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 15, 2014			
NAME (PLEASE PRINT) Kay E. Kelly	PHONE NUMBEF 720 929 6582	R TITLE Regulatory Analyst				
SIGNATURE N/A		DATE 9/12/2014				

Sundry Number: 59953 API Well Number: 43047533660000

	STATE OF UTAH			FORM 9				
ι	DEPARTMENT OF NATURAL RESOUP DIVISION OF OIL, GAS, AND M		i	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU0575				
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE							
	posals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-2004CS							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047533660000							
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		NE NUMBER: 9 720 929-6	9. FIELD and POOL or WILDCAT: 1NATERAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0819 FSL 0625 FEL		COUNTY: UINTAH						
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SESE Section: 20	STATE: UTAH							
11. CHECK	K APPROPRIATE BOXES TO INDIC.	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
TYPE OF SUBMISSION			TYPE OF ACTION					
	ACIDIZE		LITER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME				
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	☐ NEW CONSTRUCTION				
1/16/2015	OPERATOR CHANGE		LUG AND ABANDON	PLUG BACK				
 	✓ PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT	WATER SHUTOFF							
Report Date:			I TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION		OTHER	OTHER:				
The NBU 921-200	COMPLETED OPERATIONS. Clearly show 4CS was placed on production. Producing from the completion.	ction	01/16/2015 after a	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 20, 2015				
NAME (DI FACE DOUT)	DUOVE VIII	ADED	TITLE					
NAME (PLEASE PRINT) Doreen Green	PHONE NUN 435 781-9758	/IBER	TITLE Regulatory Analyst II					
SIGNATURE N/A			DATE 1/19/2015					

Sundry Number: 60886 API Well Number: 43047533660000

FORM 3160-4 (March 2012)			UNITED STATES DEPARTMENT OF THE INTERIOR								FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014			
	WE	TI COM	_	-		AGEMENT	орт а	ND I O		Lease Seri UTU0				
1a. Type of Well		Well Gas			Other Other	TION REP	OKI A	NDLO				Tribe Name		
b. Type of Comple	tion: Ne	w Well Wo	kover	Deepen	Plug Back	Diff. Resvr.	,							
		Other							7. 1			nt Name and	No.	
Name of Operato	r			Contact:		Doreen Gr	reen		8. 1		3047A me and Wel	ll No.		
KERR-MCGEE	OIL AND GA	AS ONSHOR	RE LP	Email: Dore	en.Green@ana		con				NBU	921-200	4CS	
3. Address	P.O. Box 173779				3a.	Phone No. (inclu		de)	9	API Well				
Location of Well		82017	ordance with F	Tederal requiren	ients)*	720-929-600	<i></i>		10		7-53366	Exploratory		
				Î							al Buttes			
At Surface	SF	ESE 819 FSI	L 625 FEL	Lat	40.016	5514 Lc	ng. 109	9.568387	11.	Sec., T.,	R., M., on	Block and S	urvey or	Area
At top prod. interval re	ported below SV	WSE 93 FSL	1807 FEL								г 9S	R 21E		SLB
At total depth	SV	WSE 85 FSL	1799 FEL	Lat	40.014	14987 Lc	ng. 109	9.572578			or Parish INTAH		3. Sta	te UT
14. Date Spudded	15.	Date T.D. Rea	ched	16.	Date Complet				17.			B, RT, GL)*		UI
10/14/2	013	6/1	1/2014		∐ Da	&A	\checkmark	Ready to	Prod. 5/2015		4,898	F	RKB	
18. Total Depth:		10,325	19. Plug bac			10,266			Oepth Bridge P	lug Set:	MD			
21. Type Electric &		0,116 .ogs Run (Submi	t copy of each)	TVD	1	10,057		22 Was y	well cored?	./	TVD No	☐ Yes (9	Submit a	nalvsis)
RADIAL CEMENT		•	,					Was I	OST run? tional Survey?	V	No No	Yes (S	Submit re Submit c	eport)
23. Casing and Liner		_												
Hole Size	Size/ Grade	Wt. (#/ft.	Тор	(MD) Bo	ottom (MD)	Stage Cement	er Depth		s. & Type of ement	Slurry V	ol. (BBL)	Cement '	Гор*	Amount Pulled
24.000	14 STL	36.7		0	40				81					
11.000	8.625 J55	28.0		24	3,003				041			0		
7.875 7.875	4.5 I-80 4.500 P 110	11.6		027	5,027 10,314			1,	,941			0		
					•									
24. Tubing Record														
Size	Depth Set (M		Depth (MD)	Size	Dep	oth Set (MD)	Packer	Depth (M	D) Si	ze	Depth	n Set (MD)	Pa	cker Depth (MD)
2.375		,853			26 1	D C 4: D	<u> </u>							
25. Producing Into	mation		Тор	Bottom	26. 1	Perforation Reco Perforated I	-	I	Size	l N	No. of Hol	les	Pei	rf. Status
A)	MESA VERDE		8,022	10,325	8	3,114 To		196	0.410		216	_	pen	
B)										_				
C) D)										+				
27. Acid, Fracture	e, Treatment, Cer	nent Squeeze,	etc.	l	-							- 1		
	pth Interval	DV.	W 12 152 D	DI C CI ICIVI	// TED 541			d Type of		20/50 24	EGIL G 13	ID.		
8,114	- 10,196	PU	MP 12,452 B	BLS SLICKW	/ATER, 54 I	BBLS HCL AC	ID (12.5%	5-18%), 25	52,814 LBS .	30/50 M	ESH SAN	ND		
												4		
	Test Date		Test	Flows From			ell Status		ing Gas Well	<u> </u>				
Date First Produced	Test Date	Hours Tested	Production		Gas MCF	Water BBL	Oil Gravi Corr. AP	· .	Gas Gravity					
1/16/2015	2/10/2015	24	\rightarrow	2	1449	200		İ						
Choke Size	Tbg. Press Flwg. SI	Csg. Press.	24 Hr. Rate		Gas MCF	Water BBL	Gas/Oil Ratio							
20/64	966	1500	\rightarrow	2	1449	200								
	on- Interval B				-		1							
Date First	Test Date	Hours Tested	Test Production		Gas MCF	Water BBL	Oil Gravi		Gas					
Produced		rested		DDL	IVICE	DDL	Corr. AP	`	Gravity					
Choke	Tbg. Press	Csg.	24 Hr. Rate	Oil	Gas	Water	Gas/Oil							
Size	Flwg. SI	Press.			MCF	BBL	Ratio							

^{*(}See instructions and spaces for additional data on page 2)

Sundry Number: 60886 API Well Number: 43047533660000 28b. Production- Interval C Date First Test Date Water Oil Gravity Hours Test Oil Gas Gas Gravity Produced Production BBL MCF BBL Corr. API Tested Choke 24 Hr. Rate Tbg. Press Csg. Gas Water Gas/Oil Press. BBL MCF BBL Flwg. SI Ratio Size 28c. Production- Interval D Γest Date Date First Hours Γest Water Oil Gravity Produced Production BBL MCF BBL Corr. API Choke Gas/Oil Tbg. Press Csg. 24 Hr. Rate Oil Gas Water BBL MCF BBL Flwg. SI Press. Ratio Size 29. Disposition of Gas (Sold, used for fuel, vented, etc.) 30. Summary of Porous Zones (include Aquifers): 31. Formation (Log) Markers: Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries. Top Formation Descriptions, Contents, Etc. Top Bottom Name Meas. Depth GREEN RIVER 1730 BIRD'S NEST 2033 MAHOGANY 2512 WASATCH 5183 MESA VERDE 8022 32. Additional remarks (include plugging procedure): 33. Indicate which items have been attached by placing a check in the appropriate boxes: DST Report Electrical/Mechanical Logs (1 full set req'd) Geologic Report ✓ Directional Survey Sundry Notice for plugging and cement verification Core Analysis 34. Thereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)* Name (please print) Regulatory Analyst II Signature Date 2/12/2015

(Continued on page 3) (Forms 3160-4, page 2)

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

				U	S ROC	KIES RE	EGION				
Operation Summary Report											
Well: NBU 921-2	Well: NBU 921-2004CS [BLACK] Spud date: 2/19/2014										
Project: UTAH-U	INTAH		Site: NBU	921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8			
Event: DRILLING	3		Start date	: 2/19/20	14			End date: 6/18/2014			
Active datum: RKB @4,898.00usft (above Mean Sea Level)			a	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/819	9/E/0/625/0/0			
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation			
2/19/2014	17:00 - 18:30	1.50	MIRU	01	С	Р	64	PRE JOB SAFETY MEETING. SKID RIG 20'. RIG UP SET MATTING BOARD, SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY.			
	18:30 - 20:00	1.50	MIRU	01	С	Р	64	PRE SPUD JOB SAFETY MEETING. REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD. FINISH PICKING UP BHA.			
	20:00 - 21:30	1.50	DRLSUR	02	В	Р	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 3) .17 REV/GAL PICK UP 12 1/4" DRILL BIT. SPUD @ 02/19/2014 20:00. DRILL 12.25" HOLE 44' TO 210' (166' @ 111 FPH). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.			
	21:30 - 23:00	1.50	DRLSUR	06	Α	Р	230	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP BAKER HUGHES 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.			

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20O4CS [BLACK] Spud date: 2/19/2014 Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End date: 6/18/2014 Start date: 2/19/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 23:00 - 0:00 1.00 DRLSUR 02 Ρ 230 В DRILL 11" SURFACE HOLE FROM 210' TO 280' (70' @ 70 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 900/700. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 25/25/25 K. DRAG 0 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0' HIGH & 0' LEFT OF THE LINE WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES. 2/20/2014 0:00 - 5:30 5.50 DRLSUR 02 300 DRILL 11" SURFACE HOLE FROM 280' TO 1070' (790' @ 144 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1000/750. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 58/48/52 K. DRAG 6 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.8' HIGH & 7.2' RIGHT OF THE LINE WITH 147' OF SLIDE @ 21%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 5:30 - 6:00 0.50 **DRLSUR** 23 1090 CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING CONNECTIONS. 6:00 - 17:30 11.50 DRLSUR 02 В Ρ 1090 DRILL 11" SURFACE HOLE FROM 1070' TO 2020' (950' @ 83 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1300/1100. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/50/65 K DRAG 15 K FROM DIRECTIONAL PLAN WE ARE CURRENTLY 10.6' HIGH & 3.6' RIGHT OF THE LINE WITH 53' OF SLIDE @ 5%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 17:30 - 18:00 0.50 **DRLSUR** 23 2040 CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING CONNECTIONS.

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> **US ROCKIES REGION Operation Summary Report** Well: NBU 921-20O4CS [BLACK] Spud date: 2/19/2014 Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End date: 6/18/2014 Start date: 2/19/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 18:00 - 0:00 6.00 DRLSUR 02 Ρ 2040 В DRILL 11" SURFACE HOLE FROM 2020' TO 2410' (390' @ 65 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1300/1100. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 80/50/65 K. DRAG 15 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 22' HIGH & 7' RIGHT OF THE LINE WITH 32' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES. 2/21/2014 0.00 - 5:30 5.50 DRLSUR 02 2430 DRILL 11" SURFACE HOLE FROM 2410' TO 2740' (330' @ 60 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/1250. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 90/60/72 K. DRAG 18 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 20' HIGH & 6.4' RIGHT OF THE LINE WITH 0' OF SLIDE @ 0%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND. RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES 5:30 - 6:00 0.50 **DRLSUR** 23 2760 CONDUCT PRE TOUR SAFETY MEETING. TOPIC: MAKING CONNECTIONS. 6:00 - 11:00 5.00 DRLSUR 02 В Ρ 2760 DRILL 11" SURFACE HOLE FROM 2740' TO 3015' (275' @ 55 FPH). TD WELL AT 3015'. WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1500/1300. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 98/62/79 K. DRAG 19 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 13.4' HIGH & 2.6' LEFT OF THE LINE WITH 90' OF SLIDE @ 30%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.

Sundry	Number	: 60886	APT We	-11 V	Iumbe	r: 4	30475336	560000			
US ROCKIES REGION											
Operation Summary Report											
Well: NBU 921-2	2004CS [BLAC	<]	Spud date: 2/19	9/2014							
Project: UTAH-U	Site: NBL	J 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8					
Event: DRILLING	Start date	e: 2/19/20	14			End date: 6/18/2014					
Active datum: RKB @4,898.00usft (above Mean Sea Level)				UWI: SE	E/SE/0/9/\$	S/21/E/20	/0/0/26/PM/S/819	0/E/0/625/0/0			
Date	Time	Duration	Phase	Code	Sub	P/U	MD from	Operation			
	Start-En	()			Code		(usft)				
	11:00 - 13	00 2.00	DRLSUR	05	С	Р	3035	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, 1,000 BBLS OF FRESH WATER ON LOCATION FOR CEMENT JOB.			
	13:00 - 17	30 4.50	DRLSUR	06	Α	Р	3035	PRE JOB SAFETY MEETING, TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR, AND, BIT. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN.			
	17:30 - 18	00 0.50	DRLSUR	23		Р	3035	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: RUNNING CASING.			
	18:00 - 19		DRLSUR	06	Α	Р	3035	FINISH LAYING DOWN BHA.			
	19:00 - 22	00 3.00	CSGSUR	12	С	Р	3035	RUN 68 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2,983' KB. SET TOP OF BAFFLE PLATE @ 2,938'.			

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20O4CS [BLACK] Spud date: 2/19/2014 Site: NBU 921-20P PAD Project: UTAH-UINTAH Rig name no.: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End date: 6/18/2014 Start date: 2/19/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea Date P/U Time Duration Phase Code MD from Operation Sub Start-End (hr) Code (usft) 22:00 - 0:00 2.00 **CSGSUR** 12 Ρ 3035 Ε PRE JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 1500 PSI. PUMP 170 BBLS OF FRESH WATER CLEARING MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 10 LB/SX OF GILSONITE, 2 LB/SX OF GR-3, 3% SALT BWOC, 16% GEL, & 0.25 LB/SX FLOCELE. 173 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. MIX AND PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBLS OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 DROP PLUG ON FLY. DISPLACE WITH 183.3 BBLS OF FRESH WATER. GOOD RETURNS THROUGH JOB. FINAL LIFT OF 650 PSI AT 3 BBL/MINUTE. RETURNED 40 BBL CEMENT TO SURFACE. BUMPED PLUG AT 2355. HELD FOR 5 MINUTES. TESTED FLOAT AND FLOAT HELD. RELEASE RIG 02/22/2014 AT 0000. TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 130 SX PREMIUM CEMENT WITH 4% CACL2, & .25 LB/SX FLOCELE, 26.6 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT RETURNS TO SURFACE CEMENT STAYED AT SURFACE. CEMENT JOB FINISHED @ 02/22/2014 0130. 6/6/2014 13:00 - 14:00 1 00 MIRU3 Р 3035 01 C SKID RIG 14:00 - 15:00 1.00 **PRPSPD** 14 3035 NIPPLE UP BOP Α 15:00 - 19:30 4.50 **PRPSPD** 15 Ρ 3035 TEST BLINDS, PIPE RAM, HCR VALVE, WING VALVES, CHOKE MANIFOLD, HCR VALVE FLOOR VALVES LOW 250 PSI FOR 5 MINS., HIGH 5,000 PSI FOR 10 MINS HY-DRILL LOW 250 PSI FOR 5 MINS, HIGH 2500 PSI FOR 10 MINS 19:30 - 21:30 PRPSPD 3035 2.00 В Ζ IBOP NOT TESTING. CHANGE OUT 21:30 - 23:00 1.50 **PRPSPD** 15 Α Р 3035 TEST 8 5/8 CASING TO 1500 PSI, FOR 30 MINS, **TEST IBOP** 23:00 - 23:30 0.50 **PRPSPD** 14 В Ρ 3035 INSTALL WEAR BUSHING 23:30 - 0:00 0.50 **PRPSPD** Р 3035 06 Α PU DIRECTIONAL BHA 6/7/2014 0:00 - 2:30 PRPSPD Ρ 3035 2.50 06 Α PU DIRECTIONAL BHA. PROGRAM MWD, SCRIBE, SURFACE TEST MWD 2:30 - 4:00 1.50 3035 **PRPSPD** 06 Α Р TIH WITH NEW BHA 4:00 - 5:30 1.50 **DRLPRC** 02 F Ρ 3035 TAG CEMENT @ 2852', DRILL CEMENT, PLUG @ 2958', CEMENT, AND SHOE @ 3003'. 330 GPM, 750 PSI, 150 DIFF, 5-10 WOB, 25 RPM

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		Operat	ion S	umma	ry Report			
/ell: NBU 921-2004CS [BLACK]				Spud date: 2/19/2014				
roject: UTAH-UINTAH	Site: NBU	921-20P I	PAD			Rig name no.: PROPETRO 12/12, SST 8/8		
vent: DRILLING	Start date	: 2/19/201	4			End date: 6/18/2014		
ctive datum: RKB @4,898.00usft (above M	an Sea	UWI: SE/	SE/0/9/S	5/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0		
evel)								
Date Time Dui	tion Phase)	Code	Sub Code	P/U	MD from (usft)	Operation		
	DRLPRC	02	D	P	3035	DRILL F/ 3035' T/ 4348' (1313' @ 105 FT/ HR) WOB 13 - 22 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 1950 / 1550 DIFF 400 TORQUE HIGH/LOW 11100 / 7600 OFF BOTTOM TORQUE 5200 UP/DOWN/ROT 130 / 95 / 104 BOS DEWATERING WT 9.0 VIS 29 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 11.25 12.50 Total Footage Drilled From 3035' To 4348' 1313' Total Footage Drilled Rotating 1037.00 Percent of Footage Rotated 79% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 276.00 Percent of Footage Sliding 21% Hours Total Time Rotate Drilling 4.58 Percent of Time Rotated 59% Total Time Slide Drilling 4.58 Percent of Time Sliding 41% Connection / Ream / Rig Time / Circulating / Tripping 1.25 Percent Non-Drilling Time 10% Last Survey Survey 4293' Inc 12.8 Azimuth 237.7 TVD 4102.38		

RECEIVED: Feb. 12, 2015

MD: 4348' Below 48.0' Left 11.0' / REF Plan Line

						KIES RE				
			(Opera	tion S	umma	ry Report			
/ell: NBU 921-20	004CS [BLACK]				Spud date: 2/19/2014					
roject: UTAH-UI	NTAH		Site: NBU	921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8		
vent: DRILLING	}		Start date	2/19/20	14			End date: 6/18/2014		
	(B @4,898.00usft (abov	ve Mean Sea		UWI: SE	E/SE/0/9/	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0		
evel)	,			0 - 1 -		D// I		O. matter		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation		
	18:00 - 0:00		DRLPRC	02	D	P	4348	DRILL F/ 4348' T/ 5014' (666' @ 111 FT/ HR) WOB 13 - 22 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2100 / 1700 DIFF 400 TORQUE HIGH/LOW 12800 / 9200 OFF BOTTOM TORQUE 5800 UP/DOWN/ROT 135 / 105 / 110 BOS DEWATERING WT 9.0 VIS 29 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 5.33 6.00 Total Footage Drilled From 4348' To 5014' 666' Total Footage Drilled Rotating 549.00 Percent of Footage Rotated 82% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 117.00 Percent of Footage Sliding 18% Hours Total Time Rotate Drilling 3.50 Percent of Time Rotated 66% Total Time Slide Drilling 1.84 Percent of Time Sliding 35% Connection / Ream / Rig Time / Circulating / Tripping 0.67 Percent Non-Drilling Time 11% Last Survey		

RECEIVED: Feb. 12, 2015

MD: 5014' Below 62.0' Left 15.0' / REF Plan Line

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				Opera	tion S	umma	ry Report				
/ell: NBU 921-20	O4CS [BLACK]						Spud date: 2/19/2014				
oject: UTAH-UIN	NTAH		Site: NBU	921-20F	PAD		Rig name no.: PROPETRO 12/12, SST 8/8				
vent: DRILLING			Start date	: 2/19/20	14			End date: 6/18/2014			
ctive datum: RKE	3 @4,898.00usft (ab	ove Mean Se	a	UWI: SE	E/SE/0/9/	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0			
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation			
6/8/2014	0:00 - 6:00	6.00	DRLPRC	02	D	P	5014	DRILL F/5014' T/5617' (603' @ 101 FT/ HR) WOB 13 - 22 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2150 / 1750 DIFF 400 TORQUE HIGH/LOW 13400 / 9800 OFF BOTTOM TORQUE 6800 UP/DOWN/ROT 139 / 102 / 112 BOS DEWATERING WT 9.1 VIS 29 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 5.50 6.00 Total Footage Drilled From 5014' To 5617' 603' Total Footage Drilled Rotating 520.00 Percent of Footage Rotated 86% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 83.00 Percent of Footage Sliding 14% Hours Total Time Rotate Drilling 1.25 Percent of Time Rotated 77% Total Time Slide Drilling 1.25 Percent of Time Sliding 23% Connection / Ream / Rig Time / Circulating / Tripping 0.50 Percent Non-Drilling Time 8% Last Survey Survey 5530' Inc 7.7 Azimuth 245.9 TVD 5323.67			

MD: 5617' North 24.54 East 13.64 / REF PBHL

/ell: NBU 921-200 roject: UTAH-UIN vent: DRILLING				Opera								
roject: UTAH-UIN vent: DRILLING					ition S	umma	ry Report					
vent: DRILLING	TAH			Spud date: 2/19/2014								
								Rig name no.: PROPETRO 12/12, SST 8/8				
-ti	0.0.1.0							End date: 6/18/2014				
ctive datum: RKB evel)	@4,898.00usft (ab	oove Mean S	ea	UWI: SE	E/SE/0/9/	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation				
	6:00 - 15:00	9.00	DRLPRC	02	D	P	5617	DRILL F/5617' T/6536' (919' @ 102 FT/ HR) WOB 16 - 24 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2250 / 1900 DIFF 350 TORQUE HIGH/LOW 14400 / 11000 OFF BOTTOM TORQUE 7600 UP/DOWN/ROT 139 / 102 / 112 BOS DEWATERING WT 9.3 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 8.17 9.50 Total Footage Drilled From 5617' To 6536' 919' Total Footage Drilled Rotating 861.00 Percent of Footage Rotated 94% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 58.00 Percent of Footage Sliding 6% Hours Total Time Rotate Drilling 1.42 Percent of Time Rotated 83% Total Time Slide Drilling 1.42 Percent of Time Sliding 17% Connection / Ream / Rig Time / Circulating / Tripping 1.33 Percent Non-Drilling Time 14% Last Survey Survey 6481' Inc 0.2 Azimuth 119.4 TVD 6272.80 Projection to Bit from Last Survey				
	15:00 - 15:30	0.50	DRLPRC	07	Α	Р	6536	MD: 6536' North 3.36 West 18.37 / REF PBHL RIG SERVICE				

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				Opera	tion S	umma	ry Report	
/ell: NBU 921-2	004CS [BLACK]			Spud date: 2/19/2014				
roject: UTAH-U	INTAH		Site: NBL	921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8
vent: DRILLING	3		Start date	: 2/19/20	14			End date: 6/18/2014
	KB @4,898.00usft (abo	ove Mean Sea	l	UWI: SE	E/SE/0/9/	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0
evel)	,			Code		P/U	LID (Operation
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	15:30 - 0:00	8.50	DRLPRV	02	B	P	6536	DRILL F/6536' T/7322' (786' @ 93 FT/ HR) WOB 18 - 23 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2300 / 1925 DIFF 375 TORQUE HIGH/LOW 14600 / 11100 OFF BOTTOM TORQUE 10000 UP/DOWN/ROT 175 / 115 / 128 BOS CONVENTIONAL WT 9.3 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 7.83 8.50 Total Footage Drilled From 6536' To 7322' 786' Total Footage Drilled Rotating 756.00 Percent of Footage Rotated 96% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 30.00 Percent of Footage Sliding 4% Hours Total Time Rotate Drilling 7.17 Percent of Time Rotated 92% Total Time Slide Drilling 0.66 Percent of Time Sliding 8% Connection / Ream / Rig Time / Circulating / Tripping 0.67 Percent Non-Drilling Time 8% Last Survey Survey 7243' Inc 1.3 Azimuth 40.7 TVD 7034.73

MD: 7322' North 1.04 West 13.69 / REF PBHL

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			Opera	ation S	umma	ry Report		
NBU 921-2004CS [BLACK]						Spud date: 2/1	19/2014	
ct: UTAH-UINTAH		Site: NBL	J 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8	
: DRILLING		Start date	e: 2/19/20)14			End date: 6/18/2014	
e datum: RKB @4,898.00usft ()	above Mean Se	а	UWI: SI	E/SE/0/9/\$	S/21/E/20/	1/E/20/0/0/26/PM/S/819/E/0/625/0/0		
Date Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
9/2014 0:00 - 6:00	6.00	DRLPRV	02	C	P	7322	DRILL F/7322' T/7710' (388' @ 65 FT/ HR) WOB 15 - 22 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2250 / 1850 DIFF 400 TORQUE HIGH/LOW 16200 / 14400 OFF BOTTOM TORQUE 10000 UP/DOWN/ROT 180 / 114 / 129 BOS DEWATERING WT 9.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 5.67 6.00 Total Footage Drilled From 7322' To 7710' 388' Total Footage Drilled Rotating 373.00 Percent of Footage Rotated 96% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 15.00 Percent of Footage Sliding 4% Hours Total Time Rotate Drilling 5.17 Percent of Time Rotated 91% Total Time Slide Drilling 0.50 Percent of Time Sliding 9% Connection / Ream / Rig Time / Circulating / Tripping 0.33 Percent Non-Drilling Time 6%	

MD: 7710' North 6.31 West 9.78 / REF PBHL

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				Opera	tion S	umma	ry Report					
Vell: NBU 921-2	2004CS [BLACK]			Spud date: 2/19/2014								
roject: UTAH-U	IINTAH		Site: NBL	J 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8				
vent: DRILLING	 3		Start date	e: 2/19/20	14			End date: 6/18/2014				
ctive datum: Rh	KB @4,898.00usft (ab	oove Mean S	-	1		S/21/E/20/	19/E/0/625/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation				
	6:00 - 15:30	9.50	DRLPRV	02	В	P	7710	DRILL F/7710' T/8346' (636' @ 67 FT/ HR) WOB 16 - 21 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2500 / 2100 DIFF 400 TORQUE HIGH/LOW 17800 / 15400 OFF BOTTOM TORQUE 12000 UP/DOWN/ROT 210 / 125 / 142 BOS CONVENTIONAL WT 9.6 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 8.41 9.50 Total Footage Drilled From 7710' To 8346' 636' Total Footage Drilled Rotating 606.00 Percent of Footage Rotated 95% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 30.00 Percent of Footage Sliding 5% Hours Total Time Rotate Drilling 7.41 Percent of Time Rotated 88% Total Time Slide Drilling 1.00 Percent of Time Rotated 88% Total Time Slide Drilling 1.00 Percent of Time Sliding 12% Connection / Ream / Rig Time / Circulating / Tripping 1.09 Percent Non-Drilling Time 11% Last Survey Survey 8291' Inc 1.2 Azimuth 354.8 TVD 8082.49 Projection to Bit from Last Survey				
	15:30 - 16:00	0.50	DRLPRV	07	Α	Р	8346	MD: 8346' North 17.45 West 4.05 / REF PBHL RIG SERVICE				

						KIES RE				
				Opera	tion S	umma	ry Report			
ell: NBU 921-20C	04CS [BLACK]			Spud date: 2/19/2014						
roject: UTAH-UIN	TAH		Site: NBL	921-20F	PAD		Rig name no.: PROPETRO 12/12, SST 8/8			
vent: DRILLING			Start date	: 2/19/20	14			End date: 6/18/2014		
ctive datum: RKB	@4,898.00usft (abo	ove Mean Sea	ı	UWI: SE	UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0					
evel)	,									
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation		
	16:00 - 0:00		DRLPRV	02	В	P	8346	DRILL F/8346' T/8850' (504' @ 63 FT/ HR) WOB 14 - 22 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2700 / 2350 DIFF 350 TORQUE HIGH/LOW 19500 / 16200 OFF BOTTOM TORQUE 13000 UP/DOWN/ROT 220 / 130 / 147 BOS CONVENTIONAL WT 10.2 VIS 32 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 5-10 FLARE ON CONNECTIONS Actual On Bottom Drilling Time 7.92 8.50 Total Footage Drilled From 8346' To 8850' 504' Total Footage Drilled Rotating 489.00 Percent of Footage Rotated 97% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 15.00 Percent of Footage Sliding 3% Hours Total Time Rotate Drilling 7.00 Percent of Time Rotated 88% Total Time Slide Drilling 0.92 Percent of Time Sliding 12% Connection / Ream / Rig Time / Circulating / Tripping 0.58 Percent Non-Drilling Time 7% Last Survey Survey 8767' Inc 0.4 Azimuth 227.9 TVD 8558.46		

MD: 8850' North 19.25 West 3.83 / REF PBHL

				U	S ROC	KIES RE	EGION	
				Opera	tion S	umma	ry Report	
Well: NBU 921-2	2004CS [BLACK]						Spud date: 2/1	19/2014
Project: UTAH-L	JINTAH		Site: NBL	921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING	G		Start date	e: 2/19/20	14			End date: 6/18/2014
Active datum: R _evel)	KB @4,898.00usft (ab	oove Mean S	ea	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/81	9/E/0/625/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/10/2014	0:00 - 7:30	7.50	DRLPRV	02	В	P	8850	DRILL F/8850' T/9288' (438' @ 58 FT/ HR) WOB 16 - 21 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 2900 / 2550 DIFF 350 TORQUE HIGH/LOW 22100 / 15200 OFF BOTTOM TORQUE 13700 UP/DOWN/ROT 230 / 128 / 148 BOS CONVENTIONAL WT 10.2 VIS 30 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 5' FLARE ON CONNECTIONS Actual On Bottom Drilling Time 7.17 7.50 Total Footage Drilled From 8850' To 9288' 438' Total Footage Drilled Rotating 431.00 Percent of Footage Rotated 98% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 7.00 Percent of Footage Sliding 2% Hours Total Time Rotate Drilling 6.83 Percent of Time Rotated 95% Total Time Rotate Drilling 0.33 Percent of Time Sliding 5% Connection / Ream / Rig Time / Circulating / Tripping 0.33 Percent Non-Drilling Time 4% Last Survey Survey 9147' Inc 0.9 Azimuth 173.5 TVD 8938.43 Projection to Bit from Last Survey MD: 9288' North 14.08 West 3.78 / REF PBHL
	7:30 - 9:00	1.50	DRLPRV	05	G	Р	9288	30-40' FLARE WHILE DRILLING. DISPLACE HOLE

WITH 11.4# MUD.

				U	S ROCI	KIES RE	GION	
				Opera	tion S	umma	ry Report	
Nell: NBU 921-2	004CS [BLACK]						Spud date: 2/1	19/2014
Project: UTAH-U	INTAH		Site: NBU	921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLING	3		Start date	: 2/19/20	14			End date: 6/18/2014
Active datum: Rh	ctive datum: RKB @4,898.00usft (above Mean Sea					S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	9:00 - 14:30	5.50	DRLPRV	02	В	P	9288	DRILL F/9288' T/9488' (200' @ 36 FT/ HR) WOB 17 - 21 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 3150 / 2900 DIFF 250 TORQUE HIGH/LOW 19400 / 18000 OFF BOTTOM TORQUE 12000 UP/DOWN/ROT 225 / 135 / 158 BOS CONVENTIONAL WT 11.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 5.16 7.50 Total Footage Drilled From 9288' To 9488' 200' Total Footage Drilled Rotating 200.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 5.17 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Rotated 100% Connection / Ream / Rig Time / Circulating / Tripping 2.34 Percent Non-Drilling Time 31% Last Survey Survey 9433' Inc 0.4 Azimuth 151.0 TVD 9224.42 Projection to Bit from Last Survey MD: 9488' North 12.47 West 3.06 / REF PBHL
	14:30 - 15:00	0.50	DRLPRV	07	Α	Р	9488	RIG SERVICE

			IS ROCI					
		Opera	ation S	umma	ry Report			
/ell: NBU 921-20O4CS [BLACK]				Spud date: 2/19/2014				
roject: UTAH-UINTAH	Sit	e: NBU 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8		
vent: DRILLING	Sta	art date: 2/19/20)14			End date: 6/18/2014		
etive datum: RKB @4,898.00usft (above	Mean Sea	UWI: S	E/SE/0/9/9	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0		
,	20.000		Sub Code	P/U	MD from (usft)	Operation		
	(hr) 9.00 DRL	PRV 02	B	P	9488	DRILL F/9488' T/9883' (395' @ 44 FT/ HR) WOB 18 - 21 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 3350 / 3000 DIFF 350 TORQUE HIGH/LOW 23500 / 15700 OFF BOTTOM TORQUE 13200 UP/DOWN/ROT 255 / 140 / 176 BOS CONVENTIONAL WT 11.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 8.67 9.00 Total Footage Drilled From 9488' To 9883' 395' Total Footage Drilled Rotating 395.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 8.67 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Rotated 100% Connection / Ream / Rig Time / Circulating / Tripping 0.33 Percent Non-Drilling Time 4% Last Survey Survey 9814' Inc 0.8 Azimuth 137.1 TVD 9605.39 Projection to Bit from Last Survey		

MD: 9883' North 9.42 East 0.25 / REF PBHL

Sput date: 2/19/2014 Site: NBU 921-2004CS [BLACK] Sput date: 2/19/2014 Site: NBU 921-200 PAD Rig name no.: PROPETRO 12/12, SST 8/8 Start date: 2/19/2014 End date: 6/18/2014 End date: 6/18/2014 End date: 6/18/2014 End date: 6/18/2014 Start date: 2/19/2014 End date: 6/18/2014 Start date: 6/18/		<u>Number:</u>					KIES RE						
Site: NBU 921-20P PAD													
Ventro DRILLING Start date: 2/19/2014 End date: 6/18/2014	Vell: NBU 921-2	20O4CS [BLACK]			Spud date: 2/19/2014								
Continue Project: UTAH-L	JINTAH		Site: NBL	J 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8					
Date Time Duration (hr) Phase Code Sub P/U MD from (usft) WOB 15 - 18 K.	Event: DRILLING	G		Start date	e: 2/19/20	14			End date: 6/18/2014				
Start-End	Active datum: R _evel)	KB @4,898.00usft (a	bove Mean S	ea	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/81	9/E/0/625/0/0				
WOB 15 - 18 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 3250 / 3050 DIFF 200 TORQUE HIGH/LOW 21900 / 20500 OFF BOTTOM TORQUE 17200 UP/DOWN/ROT 260 / 140 / 176 BOS CONVENTIONAL WT 11.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 1.92 2.50 Total Footage Drilled From 9863* To 9964* 81* Total Footage Drilled Rotating 81.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Skiding 0% Hours Total Time Rotate Drilling 1.92 Percent of Time Rotated 100% Total Time Rotate Drilling 0.00 Percent of Time Rotated 100% Connection / Ream / Rig Time / Circulating / Tripping 0.58 Percent Non-Drilling Time 23% Last Survey Survey 9909* Inc 0.9 Azimuth 150.2 TVD 9700.38 Projection to Bit from Last Survey MD: 9964* North 1.0 East 8.11 / FEF PBHL	Date			Phase	Code		P/U		Operation				
	6/11/2014	0:00 - 2:00	2.00	DRLPRV	02	В	P	9833	WOB 15 - 18 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 3250 / 3050 DIFF 200 TORQUE HIGH/LOW 21900 / 20500 OFF BOTTOM TORQUE 17200 UP/DOWN/ROT 260 / 140 / 176 BOS CONVENTIONAL WT 11.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 1.92 2.50 Total Footage Drilled From 9883' To 9964' 81' Total Footage Drilled Rotating 81.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 1.92 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Rotated 100% Connection / Ream / Rig Time / Circulating / Tripping 0.58 Percent Non-Drilling Time 23% Last Survey Survey 9909' Inc 0.9 Azimuth 150.2 TVD 9700.38				
		2:00 - 2:30	0.50	DRLPRV	07	Α	Р	9964	MD: 9964' North 1.0 East 8.11 / REF PBHL RIG SERVICE				

			US ROC	KIES RE	GION	
		Оре	ration S	umma	ry Report	
/ell: NBU 921-2004CS [BLACK]					Spud date: 2/1	19/2014
roject: UTAH-UINTAH		Site: NBU 921-	20P PAD			Rig name no.: PROPETRO 12/12, SST 8/8
vent: DRILLING	;	Start date: 2/19	/2014			End date: 6/18/2014
ctive datum: RKB @4,898.00usft evel)	above Mean Sea	UWI	SE/SE/0/9/	S/21/E/20/	0/0/26/PM/S/81	9/E/0/625/0/0
Date Time Start-End	Duration (hr)	Phase Coo	le Sub Code	P/U	MD from (usft)	Operation
2:30 - 6:00	3.50 D	PRLPRV 02	В	P	9964	DRILL F/9964' T/10113' (149' @ 43 FT/ HR) WOB 14 - 18 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 GPM 544 SPP ON/OFF 3300 / 3050 DIFF 250 TORQUE HIGH/LOW 23900 / 17500 OFF BOTTOM TORQUE 17800 UP/DOWN/ROT 268 / 142 / 179 BOS CONVENTIONAL WT 11.5 VIS 31 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 3.41 3.50 Total Footage Drilled From 9964' To 10113' 149' Total Footage Drilled Rotating 149.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING REPORT Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 3.41 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Rotated 100% Connection / Ream / Rig Time / Circulating / Tripping 0.09 Percent Non-Drilling Time 3% Last Survey Survey 10004' Inc 0.9 Azimuth 143.2 TVD 9795.37 Projection to Bit from Last Survey

MD: 10113' North 1.92 East 6.95 / REF PBHL

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20O4CS [BLACK] Spud date: 2/19/2014 Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End date: 6/18/2014 Start date: 2/19/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea Date P/U Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 6:00 - 13:00 7.00 **DRLPRV** 02 Ρ 10,113 В DRILL F/10113' T/10325' (212' @ 30 FT/ HR) WOB 14 - 18 K. ROT RPM 50 MOTOR RPM 109 SPM 65/65 **GPM 544** SPP ON/OFF 3450 / 3150 **DIFF 300** TORQUE HIGH/LOW 23700 / 19300 OFF BOTTOM TORQUE 18000 UP/DOWN/ROT 270 / 136 / 178 **BOS CONVENTIONAL** WT 11.7 VIS 32 PUMP LCM SWEEPS TO HELP WITH LOSSES. LOSSES 0 NO FLARE Actual On Bottom Drilling Time 6.75 7.50 Total Footage Drilled From 10113' To 10325' 212' Total Footage Drilled Rotating 212.00 Percent of Footage Rotated 100% BIT POSITION / SLIDING / ROTATING / DRILLING **REPORT** Total Footage Drilled Sliding 0.00 Percent of Footage Sliding 0% Hours Total Time Rotate Drilling 6.75 Percent of Time Rotated 100% Total Time Slide Drilling 0.00 Percent of Time Sliding Connection / Ream / Rig Time / Circulating / Tripping 0.75 Percent Non-Drilling Time 10% Last Survey Survey 10325' Inc 0.8 Azimuth 144.9 TVD 10116.33 Projection to Bit from Last Survey MD: 10325' North 3.58 East 4.61 / REF PBHL 13:00 - 15:00 Р 2.00 **DRLPRV** С 10,325 CIRULATE HOLE CLEAN AT TD 05 15:00 - 16:00 Ρ 1.00 **DRLPRV** 06 Ε 10,325 WIPER TRIP 10 STANDS. PULL 300K OFF BOTTOM. NO TIGHT SPOTS 16:00 - 18:00 2 00 **DRLPRV** 05 С Р 10,325 CIRCULATE 2x HIGH VIS SWEEPS. FIRST SWEEP RETURNED 20% CUTTINGS. SECOND SWEEP RETURNED MOSTLY FINES 18:00 - 19:00 1.00 **DRLPRV** 06 D Ρ 10,325 RU FRANKS WESTATES LD TRUCK, FLAGPOLE, AND TROUGH 19:00 - 0:00 5.00 **DRLPRV** 06 D Ρ 10,325 LDDP. PULL 290K OFF BOTTOM. NO TIGHT SPOTS. 0:00 - 3:00 6/12/2014 3.00 **DRLPRV** 06 D Ρ 10,325 FINISH LDDP 3:00 - 4:30 1.50 **DRLPRV** 06 Р 10,325 D LD DIRECTIONAL BHA. MOTOR DRAINED, NO PLAY, BIT WAS MISSING CUTTER IN THE MIDDLE OF THE NOSE 4:30 - 5:00 0.50 Ρ **PULL WEAR BUSHING** DRLPRV 14 В 10,325 5:00 - 6:00 10,325 1.00 **CSGPRO** Р 12 Α SAFETY MEETING, RU FRANKS POWER TONGS, HOSES, FLOOR, AND TORQUE TURN

2/10/2015 2:26:50PM 19

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 921-20O4CS [BLACK] Spud date: 2/19/2014 Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: PROPETRO 12/12, SST 8/8 **Event: DRILLING** End date: 6/18/2014 Start date: 2/19/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 6:00 - 16:30 10.50 **CSGPRO** 12 Ρ 10,325 С RUN 4 1/2" PRODUCTION CASING. SET @ 10314'. FLOAT @ 10268'. MARKER @ 7736'. DV TOOL @ 5407'. X/O-MARKER @ 5048'. 118 JTS OF 11.6# P110 LTC, 113 JTS OF 11.6# P110 DQX, 1 MARKER, 1 PUP, 1 X/O, 1 DV TOOL 16:30 - 17:00 0.50 **CSGPRO** 10,325 12 Α RD FRANKS POWER TONGS, HOSES, FLOOR, TORQUE TURN, LD TRUCK, AND FLAGPOLE 17:00 - 18:30 1.50 **CSGPRO** D Р 10,325 05 RU BAKER CEMENT TRUCKS, LINES, AND HOSES. CIRCULATE GAS OUT OF HOLE 18:30 - 20:30 2.00 **CSGPRO** 12 Е Ρ 10,325 CEMENT FIRST STAGE. 25 BBL SPACER, 1165 SKS/280 BBL OF 14.3# / 1.35 YIELD CEMENT, 159.1 BBLS DISPLACEMENT(73 MUD / 86.1 H2O). FINAL LIFT 2254 PSI, BUMPED 2856 PSI. FLOATS HELD. 1.5 BBLS BACK TO TRUCK 20:30 - 21:00 0.50 **CSGPRO** 13 Α Р 10,325 DROP BOMB AND OPEN DV TOOL 21:00 - 0:00 3.00 **CSGPRO** 13 Α Р 10,325 CIRCULATE BETWEEN STAGES. 50 BBLS CEMENT TO SURFACE 0:00 CIRCULATE BETWEEN STAGES 6/13/2014 - 0:30 0.50 **CSGPRO** 13 Α Р 10,325 - 2:00 0:30 1.50 **CSGPRO** 12 Ε Ρ 10,325 CEMENT SECOND STAGE. 25 BBL SPACER, 716 SKS/250 BBL OF 12.5# / 1.98 YIELD LEAD CEMENT, 60 SKS/12.3 BBL OF 15.8# / 1.16 YIELD TAIL CEMENT, 83 BBLS DISPLACEMENT. FINAL LIFT 1477 PSI, BUMP PLUG AND CLOSE DV TOOL 3182 PSI. 15 BBLS CEMENT TO SURFACE. FLOATS HELD. 1 BBL BACK TO TRUCK 2:00 - 2:30 0.50 **CSGPRO** Р 10,325 **RD CEMENTERS** 12 Α 2:30 Р - 4:00 1.50 **CSGPRO** 14 В 10,325 FLUSH OUT BOP STACK, SET PACKOFF, AND TEST - 6:00 2.00 **RDMO** Ρ 10,325 14 Α ND BOP, REMOVE CAMERON QUICK HEAD, RD FLARE LINES 6:00 - 10:00 Ρ 4.00 **RDMO** 01 10,325 CONTINUE RIG DOWN, CLEAN PITS, RELEASE RIG Ε 10:00 - 0:00 14.00 **RDMO** 01 F Ρ 10.325 RIG DOWN MUD FARM, BAR HOPPER, PREMIX TANK, CATWALK, REMOVE TOP DRIVE, LOAD OUT MUD CHEMICALS. RIG IS DOING A SLOW RIG DOWN WITH PLANS OF WAITING 1 EXTRA DAY TO HAVE PIPE INSPECTED ON LOCATION BEFORE MOVING RIG TO NEW OIL COMPANIES LOCATION. AS PER JOHN STRAHAN, ANADARKO WILL PAY FOR THE RIG

2/10/2015 2:26:50PM 20

UNTIL 6/14/2014 07:00, WHICH IS WHEN THE RIG WOULD REASONABLY BE READY TO MOVE.

				U	SROC	KIES RE	EGION	
				Opera	tion S	umma	ry Report	
Well: NBU 921-	2004CS [BLACK]						Spud date: 2/1	9/2014
Project: UTAH-U	JINTAH		Site: NBI	J 921-20F	PAD			Rig name no.: PROPETRO 12/12, SST 8/8
Event: DRILLIN	G		Start date	e: 2/19/20	14			End date: 6/18/2014
Active datum: R _evel)	KKB @4,898.00usft (a	bove Mean Se	ea	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/81	9/E/0/625/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/14/2014	0:00 - 20:00	20.00	RDMO	01	F	P	10,325	RIG DOWN CHOKE LINES, FLOWLINE, GAS BUSTER, PUMP HOUSES, MUD TANKS, BAR HOPPER, TANK FARM, AND ELECTRICAL. INSPECT DRILLPIPE, HARDBAND DRILLPIPE. SKID RIG BACK TO FIRST WELL AND PREPARE DERRICK TO LAY OVER. HAUL OFF ANADARKO STUFF TO MUD PLANT(PIPE RACKS, FLARE STACK AND CHECK VALVE, LINE BACKERS, 50' - 2" HOSE, FLARE LINES AND RACKS, MANIFOLD AND HOSES FOR TANK FARM) CLEAN OUT LAST 3 UPRIGHT TANKS, HAUL OFF UPRIGHT WATER TANKS HAUL 1 JT OF CASING AND TRICONE BIT TO SST 57. HAUL LANDING JT, SPOOL, AND WELLHEAD ADAPTER TO CAMERON.
	20:00 - 0:00	4.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT TO CONTINUE RIG DOWN
6/15/2014	0:00 - 6:00	6.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT
	6:00 - 19:00	13.00	RDMO	01	F	Р	10,325	CONTINUE INSPECTING AND HARDBANDING DRILL PIPE. LAY DERRICK OVER, UNSTRING BLOCKS, CLEAN, PAINT, AND SERVICE RIG
	19:00 - 0:00	5.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT
6/16/2014	0:00 - 6:00	6.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT
	6:00 - 18:00	12.00	RDMO	01	F	Р	10,325	CLEAN, SERVICE, AND PAINT RIG. WAIT ON RIG TO GET CONTRACTS AND RIG MOVE SORTED OUT WITH NEW OIL COMPANY. CLEAN CAMP SHACKS AND RIG DOWN EMPTY TRAILERS FOR RIG MOVE
	18:00 - 0:00	6.00	RDMO	21	С	Р	10,325	WAITING ON DAYLIGHT AND TRUCKS TO BEGIN RIG MOVE
6/17/2014	0:00 - 7:00	7.00	RDMO	21	С	Р	10,325	WAITING ON DAYLIGHT AND TRUCKS TO BEGIN RIG MOVE
	7:00 - 20:00	13.00	RDMO	01	F	P	10,325	MOVE RIG WITH WESTROC TO NEW OIL COMPANY LOCATION. 2 BED TRUCKS, 8 HAUL TRUCKS, 2 POLE TRUCKS, 1 CRANE
	20:00 - 0:00	4.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT TO CONTINUE RIG MOVE
6/18/2014	0:00 - 7:00	7.00	RDMO	21	С	Р	10,325	WAIT ON DAYLIGHT TO CONTINUE RIG MOVE
	7:00 - 20:00	13.00	RDMO	01	F	Р	10,325	FINISH MOVING RIG OFF ANADARKO LOCATION,

MOVE BOS EQUIPMENT OFF LOCATION

Anadarko Petroleum Corporation



Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E Well: NBU 921-20O4CS Wellbore: Original Hole **Final Surveys** Rig: SST 8

Surface Location: SHL 819' FSL & 625' FEL Sec 20-T9S-R21E

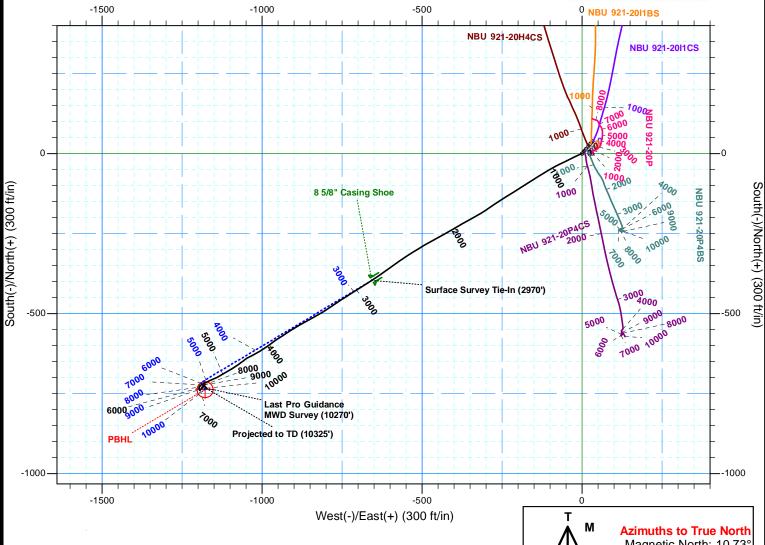
Universal Transverse Mercator (US Survey Feet) NAD 1927 (NADCON CONUS) Zone 12N (114 W to 108 W) 4874' GL + 24' Kb @ 4898.00ft (SST 8)

Northing Easting 14535293.99 2041455.21 **Latitude** 40.016549 Longitude -109.567698

						SECTION Pla			
MD 2950.00 2998.52 3765.87 5644.05 5750.73 10292.81	Inc 20.66 20.66 20.66 0.00 0.32 0.32	Azi 237.61 239.12 239.12 0.00 149.11 149.11	TVD 2823.17 2868.57 3586.57 5424.32 5530.99 10073.00	+N/-S -395.66 -404.64 -543.58 -715.49 -715.74 -737.48	+E/-W -656.90 -671.47 -903.84 -1191.33 -1191.18 -1178.18	Dleg 0.00 1.10 0.00 1.10 0.30 0.00	TFace 0.00 90.71 0.00 180.00 149.11 0.00	VSect 766.74 783.86 1054.54 1389.44 1389.44 1389.95	Annotation Survey Tie-In/Begin Turn at 2950' MD, 2823' TVD Begin Hold at 2999' MD, 2869' TVD Begin Drop at 3766' MD, 3587' TVD Begin Build at 5644' MD, 5424' TVD Begin Hold at 5751' MD, 5531' TVD PBHL







Azimuth Corrections

To convert a Magnetic Direction to a True Direction, Add 10.73° East To convert a True Direction to a Grid Direction, Subtract 0.92° To convert a Magnetic Direction to a Grid Direction, Add 9.81°

Date: 8:14, June 12 2014 Created By: Bob Hays

Magnetic North: 10.73°

Magnetic Field Strength: 52038.3snT Dip Angle: 65.79° Date: 05/20/2014 Model: IGRF2010

Anadarko Petroleum Corporation



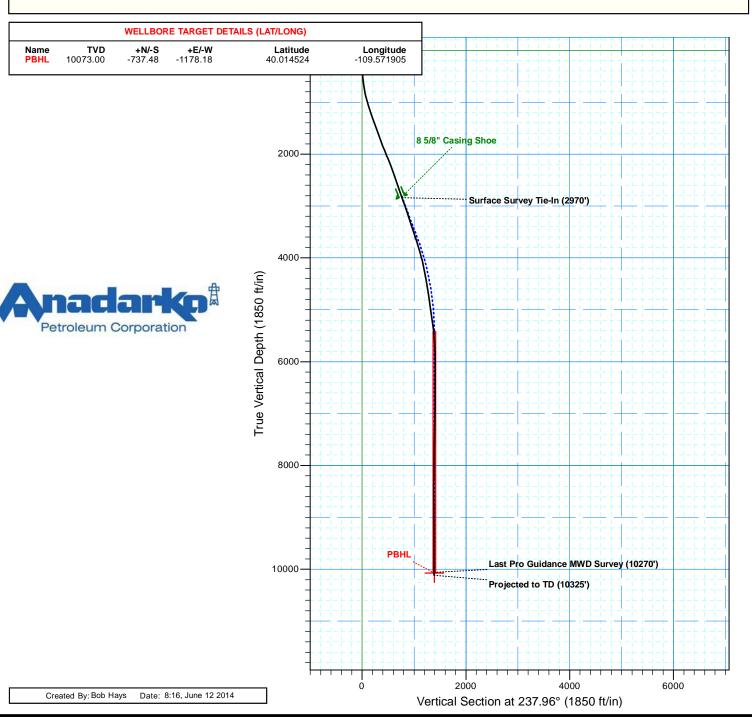
Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E Well: NBU 921-2004CS Wellbore: Original Hole Final Surveys Rig: SST 8

Surface Location: SHL 819' FSL & 625' FEL Sec 20-T9S-R21E

Universal Transverse Mercator (US Survey Feet)
NAD 1927 (NADCON CONUS)
Zone 12N (114 W to 108 W)
Elevation: 4874' GL + 24' Kb @ 4898.00ft (SST 8)
Northing Easting Latitude
14535293.99 2041455.21 40.016549 -1

Longitude -109.567698

					Si	ECTION DE Plan 1			
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
2950.00	20.66	237.61	2823.17	-395.66	-656.90	0.00	0.00	766.74	Survey Tie-In/Begin Turn at 2950' MD, 2823' TVD
2998.52	20.66	239.12	2868.57	-404.64	-671.47	1.10	90.71	783.86	Begin Hold at 2999' MD, 2869' TVD
3765.87	20.66	239.12	3586.57	-543.58	-903.84	0.00	0.00	1054.54	Begin Drop at 3766' MD, 3587' TVD
5644.05	0.00	0.00	5424.32	-715.49	-1191.33	1.10	180.00	1389.44	Begin Build at 5644' MD, 5424' TVD
5750.73	0.32	149.11	5530.99	-715.74	-1191.18	0.30	149.11	1389.44	Begin Hold at 5751' MD, 5531' TVD
10292.81	0.32	149.11	10073.00	-737.48	-1178.18	0.00	0.00	1389.95	PBHL





Anadarko Petroleum Corporation

Uintah Co., UT (UTM) Sec 20-T9S-R21E NBU 921-20O4CS

Original Hole

Design: Final Surveys

Standard Survey Report

12 June, 2014





Professional Directional LTD

Survey Report



Company: Anadarko Petroleum Corporation

Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-2004CS
Wellbore: Original Hole

Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: Well NBU 921-20O4CS

4874' GL + 24' Kb @ 4898.00ft (SST 8) 4874' GL + 24' Kb @ 4898.00ft (SST 8)

True

Survey Calculation Method: Minimum Curvature

Database: EDM 5000.1 Single User Db

Project Uintah Co., UT (UTM)

Final Surveys

Map System: Universal Transverse Mercator (US Survey Fee System Datum: Mean Sea Level

Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: Zone 12N (114 W to 108 W)

Site Sec 20-T9S-R21E

Northing: 14,536,796.93 usft Site Position: 40.020877 Latitude: Lat/Long Easting: From: 2,036,855.98 usft Longitude: -109.584034 **Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in Grid Convergence: 0.91°

Well NBU 921-20O4CS

Well Position +N/-S 0.00 ft Northing: 14,535,293.99 usft Latitude: 40.016549 +E/-W 0.00 ft Easting: 2,041,455.21 usft Longitude: -109.567698 0.00 ft Wellhead Elevation: 0.00 ft **Ground Level:** 4,874.00 ft **Position Uncertainty**

Wellbore Original Hole

 Magnetics
 Model Name
 Sample Date
 Declination (°)
 Dip Angle (nT)
 Field Strength (nT)

 IGRF2010
 05/20/14
 10.73
 65.79
 52,038

Survey Program Date 06/12/14 From То (ft) (ft) Survey (Wellbore) **Tool Name** Description 2,970.00 Surface Surveys (Original Hole) MWD MWD 20.00 3,055.00 10,270.00 Pro Guidance MWD Surveys (Original Hol MWD MWD 10,325.00 10,325.00 Projected to TD (Original Hole) Projection Projection

Survey Measured Vertical Vertical Dogleg Build Turn Section Depth Depth +N/-S Rate Rate Inclination Azimuth +E/-W Rate (°/100ft) (°/100ft) (°/100ft) (ft) (ft) (ft) (ft) (°) (°) (ft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 20.00 0.00 20.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Surveys Adjusted for 24' KB Height 0.09 217.00 0.18 105.25 217.00 -0.08 0.30 -0.210.090.00 301.00 252.02 1.75 1.32 300.99 -0.41-0.490.64 1.36 174.73 383.00 2.29 259.14 382.95 -1.02-3.00 3.08 1.21 1.18 8.68 473.00 4.40 246.57 472.79 -2.73-7.948.17 2.47 2.34 -13.97 563.00 6.25 244.57 562.40 -6.20-15.53 16.45 2.07 2.06 -2.22 653.00 7.83 244.29 651.72 -10.97 -25.48 27.41 1.76 1.76 -0.31 743.00 9.78 243.85 740.66 -17.00 -37.86 41.11 2.17 2.17 -0.49833.00 11.84 243.14 829.05 -24.54 -52.96 57.91 2.29 2.29 -0.79923.00 13.65 243.40 916.83 -33.46 -70.70 77.68 2.01 2.01 0.29 1,013.00 15.52 241.20 1,003.93 -44.02 -90.75 100.28 2.17 2.08 -2.44 1,103.00 17.59 239.10 1,090.19 -56.81 -112.97 125.90 2.39 2.30 -2.331,193.00 19.70 238.22 1,175.47 -71.78 -137.54 154.67 2.37 2.34 -0.98 -88.03 1,283.00 19.79 237.17 1,260.18 -163.23 185.07 0.41 0.10 -1.17

06/12/14 8:13:19AM Page 2 COMPASS 5000.1 Build 72



Professional Directional LTD

Survey Report



Company: Anadarko Petroleum Corporation

Final Surveys

Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-2004CS
Wellbore: Original Hole

Design:

Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well NBU 921-20O4CS

4874' GL + 24' Kb @ 4898.00ft (SST 8) 4874' GL + 24' Kb @ 4898.00ft (SST 8)

True

Minimum Curvature

EDM 5000.1 Single User Db

еу									
Measure Depth (ft)		Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,373	.00 20.14	236.55	1,344.77	-104.83	-188.96	215.79	0.45	0.39	-0.69
1,463			1,429.34	-104.85	-214.94	246.58	0.43	-0.30	2.26
-									
1,553			1,514.07	-137.30	-240.74	276.91	0.45	-0.39	-0.69
1,643			1,598.92	-153.32	-266.13	306.93	0.17	-0.08	-0.47
1,733	.00 19.70	235.41	1,683.72	-169.97	-291.26	337.07	0.84	0.28	-2.37
1,823	.00 20.49		1,768.24	-186.98	-317.08	367.97	1.26	0.88	2.63
1,913	.00 21.38	241.46	1,852.30	-203.22	-344.82	400.10	1.76	0.99	4.09
2,003	.00 22.07	241.30	1,935.91	-219.17	-374.06	433.36	0.77	0.77	-0.18
2,093	.00 22.09	240.19	2,019.31	-235.71	-403.58	467.15	0.46	0.02	-1.23
2,183		240.41	2,102.67	-252.52	-433.05	501.05	0.16	0.13	0.24
2,273	.00 21.90	240.77	2,186.08	-269.12	-462.49	534.81	0.38	-0.34	0.40
2,363			2,269.96	-285.21	-490.84	567.38	1.50	-1.47	-0.81
2,453			2,354.39	-301.06	-517.69	598.55	0.83	-0.69	-1.33
2,543			2,439.17	-317.08	-543.30	628.75	1.02	-0.78	-1.96
2,633				-333.27	-567.79	658.10	0.64	-0.78	-1.90
2,033	.00 16.62	233.94	2,524.25	-333.21	-367.79	636.10	0.04	-0.49	-1.27
2,723	.00 17.85	233.48	2,609.68	-349.61	-590.90	686.36	1.38	-1.08	-2.73
2,813	.00 18.71	234.64	2,695.14	-366.18	-613.76	714.53	1.04	0.96	1.29
2,903			2,780.22	-383.01	-637.79	743.83	0.75	0.71	0.76
2,970			2,843.17	-395.66	-656.90	766.74	2.28	1.96	3.42
-	e Survey Tie-In (2		_,						
3,055			2,922.80	-411.64	-681.98	796.48	0.43	-0.42	-0.25
3,150	.00 19.10	237.20	3,012.24	-428.94	-708.93	828.50	1.27	-1.26	-0.21
3,245			3,102.30	-445.14	-734.45	858.72	1.19	-1.16	0.84
3,341			3,193.76	-460.92	-758.99	887.90	0.78	-0.63	-1.56
3,436			3,283.87	-477.72	-783.93	917.95	2.23	2.21	-0.95
3,531			3,373.48	-495.00	-810.32	949.49	0.87	-0.21	2.53
3,627			3,464.33	-510.49	-837.17	980.47	1.67	-0.94	4.27
3,722			3,554.73	-524.11	-863.00	1,009.59	1.05	-1.05	0.21
3,817			3,645.29	-538.45	-887.86	1,038.27	1.49	0.42	-4.74
3,913			3,736.54	-554.19	-913.20	1,068.10	0.66	0.63	0.73
4,008	.00 16.70	235.80	3,827.11	-569.70	-937.27	1,096.73	1.98	-1.79	-2.84
4,103	.00 15.40	235.60	3,918.41	-584.50	-958.97	1,122.98	1.37	-1.37	-0.21
4,198	.00 14.80	234.20	4,010.13	-598.72	-979.22	1,147.69	0.74	-0.63	-1.47
4,293			4,102.38	-611.44	-997.96	1,170.32	2.28	-2.11	3.68
4,388		241.50	4,195.27	-621.55	-1,015.10	1,190.22	1.69	-1.47	4.00
4,483			4,288.43	-630.30	-1,031.53	1,208.79	0.28	-0.21	0.95
4,578	.00 10.70	237.70	4,381.70	-639.29	-1,047.16	1,226.81	1.08	-0.53	-4.95
4,674			4,476.27	-648.77	-1,060.65	1,243.26	1.99	-1.67	-6.35
4,768			4,569.23	-657.31	-1,000.03	1,257.17	1.19	-1.17	1.60
4,766			4,664.23	-665.13	-1,071.70	1,270.92	0.84	0.52	4.58
4,959	.00 8.40	237.00	4,758.20	-672.69	-1,094.77	1,284.88	0.13	-0.11	-0.53
5,054			4,852.22	-679.76	-1,106.42	1,298.50	0.62	-0.32	3.68
5,149	.00 7.10	240.80	4,946.39	-685.92	-1,117.37	1,311.05	1.05	-1.05	0.32



Professional Directional LTD

Survey Report

Database:



Anadarko Petroleum Corporation Company:

Project: Uintah Co., UT (UTM) Site: Sec 20-T9S-R21E NBU 921-20O4CS Well: Wellbore: Original Hole

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: **Survey Calculation Method:** Well NBU 921-20O4CS

4874' GL + 24' Kb @ 4898.00ft (SST 8) 4874' GL + 24' Kb @ 4898.00ft (SST 8)

Minimum Curvature

EDM 5000.1 Single User Db

Final Surveys Design:

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
5,244.00	7.80	239.20	5,040.58	-692.09	-1,128.03	1,323.36	0.77	0.74	-1.68
5,339.00	8.40	242.30	5,134.63	-698.61	-1,139.71	1,336.73	0.78	0.63	3.26
5,434.00	8.40	246.70	5,228.62	-704.58	-1,152.23	1,350.51	0.68	0.00	4.63
5,530.00	7.70	245.90	5,323.67	-709.98	-1,164.54	1,363.81	0.74	-0.73	-0.83
5,625.00	7.00	245.70	5,417.89	-714.96	-1,175.62	1,375.84	0.74	-0.74	-0.21
5,720.00	5.20	240.00	5,512.35	-719.50	-1,184.63	1,385.88	2.00	-1.89	-6.00
5,815.00	4.00	239.40	5,607.04	-723.34	-1,191.21	1,393.50	1.26	-1.26	-0.63
5,910.00	2.40	216.80	5,701.89	-726.62	-1,195.25	1,398.67	2.11	-1.68	-23.79
6,005.00	1.10	197.00	5,796.85	-729.08	-1,196.71	1,401.21	1.49	-1.37	-20.84
6,100.00		192.30	5,891.83	-730.85	-1,197.17	1,402.54	0.09	0.00	-4.95
6,195.00		180.10	5,986.81	-732.81	-1,197.37	1,403.75	0.34	0.21	-12.84
6,291.00		55.30	6,082.80	-733.81	-1,197.23	1,404.16	1.48	-1.15	-130.00
6,386.00		137.90	6,177.80	-733.84	-1,196.98	1,403.96	0.28	0.00	86.95
0.404.00	0.00	440.40	6,272.80	704.04	4 400 70	4 400 00	0.07	0.00	40.47
6,481.00		119.40		-734.04 -734.05	-1,196.73	1,403.86	0.07	0.00	-19.47
6,576.00		155.30	6,367.80	-734.35	-1,196.48	1,403.81	0.19	0.11	37.79
6,671.00		154.20	6,462.80	-735.10	-1,196.12	1,403.90	0.42	0.42	-1.16
6,767.00		158.00	6,558.79	-736.09	-1,195.68	1,404.06	0.11	-0.10	3.96
6,862.00	0.90	175.40	6,653.78	-737.30	-1,195.43	1,404.49	0.39	0.32	18.32
6,957.00		161.50	6,748.77	-738.83	-1,195.11	1,405.02	0.26	0.11	-14.63
7,053.00		141.20	6,844.76	-739.82	-1,194.69	1,405.19	0.76	-0.73	-21.15
7,148.00		30.60	6,939.75	-739.08	-1,193.98	1,404.20	1.51	1.05	-116.42
7,243.00		40.70	7,034.73	-737.34	-1,192.73	1,402.22	0.24	0.00	10.63
7,338.00	1.10	53.40	7,129.71	-735.98	-1,191.30	1,400.28	0.35	-0.21	13.37
7,433.00	1.00	74.00	7,224.69	-735.21	-1,189.77	1,398.57	0.41	-0.11	21.68
7,528.00	1.20	10.00	7,319.68	-734.00	-1,188.80	1,397.11	1.24	0.21	-67.37
7,624.00	1.10	18.60	7,415.66	-732.13	-1,188.33	1,395.73	0.21	-0.10	8.96
7,719.00	1.10	28.40	7,510.64	-730.47	-1,187.61	1,394.23	0.20	0.00	10.32
7,814.00	1.40	66.50	7,605.62	-729.20	-1,186.11	1,392.29	0.91	0.32	40.11
7,910.00	1.30	86.30	7,701.59	-728.66	-1,183.95	1,390.17	0.49	-0.10	20.63
8,005.00		43.30	7,796.57	-727.75	-1,182.07	1,388.10	1.05	0.11	-45.26
8,100.00		349.80	7,891.54	-725.60	-1,181.51	1,386.48	1.43	0.21	-56.32
8,196.00		351.80	7,987.51	-723.20	-1,181.91	1,385.54	0.32	-0.31	2.08
8,291.00		354.80	8,082.49	-721.15	-1,182.15	1,384.66	0.13	-0.11	3.16
8,386.00	0.80	3.20	8,177.47	-719.49	-1,182.20	1,383.82	0.45	-0.42	8.84
8,481.00		42.60	8,272.47	-718.34	-1,181.72	1,383.82	0.43	0.00	41.47
8,576.00		100.70	8,367.46	-718.34 -717.90	-1,181.72	1,382.80	0.57	-0.53	61.16
8,671.00		286.00	8,462.46	-717.83	-1,181.18	1,382.08	0.73	0.21	-183.89
8,767.00		227.90	8,558.46	-717.94	-1,181.83	1,382.68	0.46	-0.10	-60.52
0.000.00	0.70	175 40	0 GEO 45	740 74	1 100 00	1 202 20	0.50	0.20	EE 00
8,862.00		175.40	8,653.45	-718.74 -710.80	-1,182.03	1,383.28	0.59	0.32	-55.26
8,957.00		192.40	8,748.45	-719.89	-1,182.11	1,383.95	0.22	0.00	17.89
9,052.00		176.80	8,843.44	-721.12	-1,182.19 -1,182.07	1,384.68	0.24	0.11	-16.42
9,147.00 9,243.00		173.50 168.00	8,938.43 9,034.42	-722.52 -723.68	-1,182.07 -1,181.90	1,385.32 1,385.79	0.12 0.42	0.11 -0.42	-3.47 -5.73
9,243.00	0.50	100.00	5,004.42	-123.00	-1,101.90	1,303.79	0.42	-0.42	-0.73



Professional Directional LTD

Survey Report



Company: Anadarko Petroleum Corporation

Project: Uintah Co., UT (UTM)
Site: Sec 20-T9S-R21E
Well: NBU 921-2004CS
Wellbore: Original Hole
Design: Final Surveys

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Database:

Well NBU 921-20O4CS

4874' GL + 24' Kb @ 4898.00ft (SST 8) 4874' GL + 24' Kb @ 4898.00ft (SST 8)

True

Minimum Curvature

EDM 5000.1 Single User Db

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rvey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,338.00	0.20	135.90	9,129.42	-724.20	-1,181.70	1,385.90	0.37	-0.32	-33.79
9,433.00	0.40	151.00	9,224.42	-724.61	-1,181.42	1,385.88	0.22	0.21	15.89
9,528.00	0.40	134.90	9,319.42	-725.14	-1,181.03	1,385.82	0.12	0.00	-16.95
9,623.00	0.70	128.70	9,414.41	-725.73	-1,180.34	1,385.56	0.32	0.32	-6.53
9,719.00	0.80	132.30	9,510.40	-726.55	-1,179.39	1,385.18	0.12	0.10	3.75
9,814.00	0.80	137.10	9,605.39	-727.48	-1,178.44	1,384.88	0.07	0.00	5.05
9,909.00	0.90	150.20	9,700.38	-728.62	-1,177.62	1,384.78	0.23	0.11	13.79
10,004.00	0.90	143.20	9,795.37	-729.86	-1,176.80	1,384.75	0.12	0.00	-7.37
10,100.00	1.00	134.50	9,891.36	-731.05	-1,175.75	1,384.49	0.18	0.10	-9.06
10,195.00	1.00	144.90	9,986.34	-732.31	-1,174.69	1,384.26	0.19	0.00	10.95
10,270.00	0.80	144.90	10,061.34	-733.28	-1,174.01	1,384.19	0.27	-0.27	0.00
Last Pro	Guidance MWI	Survey (102	70')						
10,325.00	0.80	144.90	10,116.33	-733.90	-1,173.57	1,384.15	0.00	0.00	0.00
Projected	d to TD (10325')								

Design Anno	otations				
	Measured	Vertical	Local Coo	rdinates	
	Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
	20.00	20.00	0.00	0.00	Surveys Adjusted for 24' KB Height
	2,970.00	2,843.17	-395.66	-656.90	Surface Survey Tie-In (2970')
	10,270.00	10,061.34	-733.28	-1,174.01	Last Pro Guidance MWD Survey (10270')
	10,325.00	10,116.33	-733.90	-1,173.57	Projected to TD (10325')

06/12/14 8:13:19AM Page 5 COMPASS 5000.1 Build 72

						KIES RE		
				Opera	tion S	Summa	ry Report	
Well: NBU 921-2	2004CS [BLACK]						Spud date: 2/1	9/2014
Project: UTAH-U	IINTAH		Site: NBL	J 921-20F	PAD			Rig name no.: MILES 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLE	TION		Start date	e: 7/15/20	14			End date: 1/16/2015
Active datum: RI Level)	KB @4,898.00usft (al	oove Mean Se	ea	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/819	9/E/0/625/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
7/15/2014	12:00 - 19:00	7.00	DRLOUT	31	I	Р		MIRU, NDWH, NU BOP'S, TEST BOP'S, PU BIT, BIT SUB, 1 JT, STRING MILL, TBG, TIH TO TAG DV TOOL, TAG 124' HIGH, DRILL CEMENT, TAG TOOL, 170 JTS, 5161', DRILL DV TOOL, BREAK THRU, DV TOOL HARD DRILLING, WORK STRING MILL TO POLISH TOOL, CIRC BTM UP TO CLEAN TBG, SWIFN
7/16/2014	7:00 - 7:30	0.50	DRLOUT	48	I	Р		TRIPPING
	7:30 - 17:30	10.00	DRLOUT	31	I	Р		POLISH DV TOOL WIT STRING MILL, TIH, C/O TO FC, 323 JTS, 10,266', BREAK CIRC, TEST CSG TO 1000#, POOH, LAY DWN TBG ON TLR, ND BOP'S, NUWH, RDMO
7/17/2014	7:00 - 15:00	8.00		46	Α	Р		STANDBY
7/18/2014	-							FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -55 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 500 PSI HELD FOR 5 MIN LOST -453 PSI, BLED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING PULLED 10' FLUID FROM 4 1/2" CSG TO STOP FREEZING
7/22/2014	6:45 7:00	0.05	CLIDCDD	40		Б		LIOM
12/1/2014	6:45 - 7:00 7:00 - 8:30	0.25	SUBSPR SUBSPR	48	C	Р		HSM.
	7:00 - 8:30 8:30 - 17:00	1.50 8.50	SUBSPR	30 31	G I	P P		ROAD RIG F/ NBU 922-34M PAD. MIRU RIG & SPOT EQUIP. OPEN WELL = 0 PSI. ND WH. NU BOP. RU RIG FLOOR & TBG EQUIP. PU 37/8 MILL & POBS. RIH W/ 245 JTS, 23/8 TBG. EOT @ 7760'. SWIFN.
12/2/2014	7:00 - 17:00	10.00	SUBSPR	31	I	Р		FINISH TIH W/ 2 3/8" TBG TO PBTD 10,257', CIRC & DISPLACE WELL W/ 143 BBLS T-MAC W/ RIOCIDE, CATCH SAMPLE AT SURFACE, 5130, AND 10257', TOOH W/ LAY DN TBG ON TRAILER, N/D BOPS, N/U WH, RIG DN UNIT MOVE OVER TO NEXT WELL, SDFN

2/10/2015 2:28:07PM 1

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> **US ROCKIES REGION Operation Summary Report** Spud date: 2/19/2014 Well: NBU 921-20O4CS [BLACK] Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: MILES 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3 **Event: COMPLETION** Start date: 7/15/2014 End date: 1/16/2015 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea Date Code P/U Operation Time Duration Phase Sub MD from Start-End (hr) Code (usft) 12/11/2014 7:00 - 8:00 1.00 SUBSPR 52 Р В FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -40 PSI NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. PRESSURE TEST 8 5/8 X 4 1/2 TO 550 PSI HELD FOR 5 MIN LOST -5 PSI, BLED PSI OFF, REINSTALLED POP OFF **SWIFN** NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1/2 BBL H2O 11:00 - 12:00 1.00 SUBSPR 37 Ε PERF STG 1)PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW 7:00 - 17:00 12/18/2014 Р 10.00 **FRAC** 36 ROAD NABORS FRAC EQUIP T/ LOC. MIRU FRAC CREW. INSTALL RESTRAINTS. SDFN. 12/19/2014 14:15 - 17:00 2 75 **FRAC** 36 Ε Р FRAC STG 1)WHP 1770 PSI, BRK 3447 PSI @ 4.3 BPM. ISIP 2920 PSI, FG. 0.73 ISIP 2988 PSI, FG. 0.73, NPI 68 PSI. SWI, XO T/ WL. PERF STG 2)RIH SET CBP & PERF AS PER DESIGN. POOH, SWIFN. 12/20/2014 **FRAC** 36 Ε FRAC STG 2)WHP 1077 PSI, BRK 3853 PSI @ 4.1 BPM. ISIP 2366 PSI, FG. 0.68 ISIP 3384 PSI, FG. 0.78, NPI 1018 PSI. SWI. XO FOR WL. PERF STG 3)RIH SET CBP & PERF AS DESIGN. POOH, XO T/ FRAC. FRAC STG 3)WHP 1707 PSI, BRK 2879 PSI @ 4.3 BPM. ISIP 2439 PSI, FG. 0.68 ISIP 3171 PSI, FG. 0.76, NPI 732 PSI. SWI, XO T/ WL. PERF STG 4)RIH SET CBP & PERF AS DESIGN. SWIFN. 12/21/2014 - 17:00 7.08 **FRAC** FRAC STG 4)WHP 2036 PSI, BRK 4681 PSI @ 4.1 BPM. ISIP 2945 PSI, FG. 0.75 ISIP 3150 PSI, FG. 0.77, NPI 205 PSI. SWI, XO T/ WL. PERF STG 5)RIH SET CBP & PERF AS DESIGN. POOH, XO T/ FRAC. FRAC STG 5)WHP 2161 PSI, BRK 4087 PSI @ 4.2 BPM, ISIP 2908 PSI, FG, 0.75 ISIP 3171 PSI, FG, 0.78. NPI 263 PSI, SWIFN.

2/10/2015 2:28:07PM 2

HSM. JSA

12/22/2014

7:30 - 7:45

0.25

FRAC

48

				U	S ROC	KIES RE	EGION	
				Opera	tion S	umma	ry Report	
Well: NBU 921-2	2004CS [BLACK]						Spud date: 2/1	19/2014
Project: UTAH-L	JINTAH		Site: NBL	J 921-20F	PAD			Rig name no.: MILES 3/3, ROCKY MOUNTAIN WELL
						_		SERVICE 3/3
Event: COMPLE	TION		Start date					End date: 1/16/2015
Active datum: R Level)	KB @4,898.00usft (al	oove Mean Se	a	UWI: SE	E/SE/0/9/	S/21/E/20/	/0/0/26/PM/S/81	9/E/0/625/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	8:00 - 18:00	10.00	FRAC	36	E	P		FRAC SATGE 6)WHP 1399 PSI, BRK 3047 PSI @ 4.4 BPM. ISIP 2410 PSI, FG. 0.71 ISIP 2939 PSI, FG. 0.77 NPI 529 PSI. X/O WL. PERF STAGE 7) RIH SET CBP & PERF AS PER DESIGN. POOH, X/O T/FRAC FRAC STAGE 7) WHP 2432 PSI, BRK 3406 PSI @ 4 BPM. ISIP 2791 PSI, FG. 0.76 ISIP 2909 PSI, FG. 0.77 NPI 118 PSI. X/O WL PERF STAGE 8) RIH SET CBP & PERF AS PER DESIGN. POOH. SWIFN W/O FRAC
12/23/2014	6:15 - 6:30	0.25	FRAC	48		Р		HSM,JSA
	6:30 - 18:00	11.50	FRAC	36	E	P		FRAC STAGE 8)WHP 1575 PSI, BRK 2510 PSI @ 4.4 BPM. ISIP 1882 PSI, FG. 0.66 ISIP 2615 PSI, FG. 0.75 NPI 733 PSI. X/O WL. PERFORATE STAGE 9) RIH SET CBP & PERF AS PER DESIGN. POOH, X/O T/FRAC. FRAC STAGE 9)WHP 2113 PSI, BRK 5189 PSI @ 4.2 BPM. ISIP 2838 PSI, FG. 0.78 ISIP 2874 PSI, FG. 0.79 NPI 36 PSI. X/O WL. SET TOP KILL PLUG.
1/15/2015	6:45 - 7:00	0.25	DRLOUT	48		Р		HSM. SLIP, TRIP & FALLS.
	7:00 - 16:00	9.00	DRLOUT	31	I	Р		OPEN WEL O PSI. RU RIG FLOOR & TBG EQUIP. RU PIPE WRANGLER. PREP & TALLY NEW 23/8 P-110 TBG. PU 37/8 BIT, X-DART, POBS, 1.875 XN. RIH W/ 245 JTS TAG SAND @ 7786'. RU DRL EQUIP. SWI. WINTERIZE WH. SDFN.
1/16/201E	6:45 7:00		DDI OLIT					LICM CTAY OFF FLOOD WILL F CWIVE IC TUDNING

2/10/2015 2:28:07PM 3

Р

1/16/2015

6:45 - 7:00

0.25

DRLOUT

48

HSM. STAY OFF FLOOR WHILE SWIVEL IS TURNING.

<u> Sundry Number: 60886 API Well Number: 43047533660000</u> **US ROCKIES REGION Operation Summary Report** Spud date: 2/19/2014 Well: NBU 921-20O4CS [BLACK] Project: UTAH-UINTAH Site: NBU 921-20P PAD Rig name no.: MILES 3/3, ROCKY MOUNTAIN WELL SERVICE 3/3 End date: 1/16/2015 **Event: COMPLETION** Start date: 7/15/2014 UWI: SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0 Active datum: RKB @4,898.00usft (above Mean Sea Date Phase Code P/U Operation Time Duration Sub MD from Start-End (hr) Code (usft) 7:00 - 17:00 10.00 DRLOUT Р OPEN WELL 0 PSI. PSI TEST BOP & 3" FLOW LINE T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. BRK CONV CIRC. BEG DRL OUT. 1st CBP)TAG SAND @ 8029' = 25' SAND. DRL OUT CBP @ 8024' IN 8 MIN, 1100 PSI INCR. CONT RIH. 2nd CBP)TAG SAND @ 8277' = 30' SAND. DRL OUT CBP @ 8307' IN 8 MIN, 700 PSI INCR. CONT RIH. 3rd CBP)TAG SAND @ 8545' = 45' SAND. DRL OUT CBP @ 8590' IN 8 MIN, 800 PSI INCR. CONT RIH. 4th CBP)TAG SAND @ 8856' = 25' SAND. DRL OUT CBP @ 8881' IN 8 MIN, 500 PSI INCR. CONT RIH. 5th CBP)TAG SAND @ 9011' = 15' SAND. DRL OUT CBP @ 9026' IN 8 MIN, 800 PSI INCR. CONT RIH. 6th CBP)TAG SAND @ 9321' = 40' SAND. DRL OUT CBP @ 9361' IN 8 MIN, 750 PSI INCR. CONT RIH. 7th CBP)TAG SAND @ 9549' = 55' SAND. DRL OUT CBP @ 9604' IN 8 MIN, 550 PSI INCR. CONT RIH. 8th CBP)TAG SAND @ 9813' = 45' SAND. DRL OUT CBP @ 9858' IN 8 MIN, 750 PSI INCR. CONT RIH. 9th CBP)TAG SAND @ 9974' = 30' SAND. DRL OUT CBP @ 10,004' IN 8 MIN, 700 PSI INCR. CONT RIH. CO 15' SAND T/ PBTD @ 10,266'. CIRC WELL. POOH LD EXESS TBG. PU 41/16 TBG HNGR. LAND TBG ON HNGR W/ 310 JTS 23/8 P-110 JTS W/ 1.875 XN & 1/2 POBS. EOT @ 9852'. RD TBG EQUIP & RIG FLOOR. ND BOP. NU WH. DRP PSI TEST HAL 9K LINES T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. WAIT 30 MIN FOR BALL T/ FALL. PUMP BIT OFF W/ 3000 PSI. UNLOAD TBG T/ PIT. TURN WELL OVER T/ FBC W/ 2300 PSI ON CSG.

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RECEIVED: Feb. 12, 2015

RACK OUT RIG EQUIP. RD RIG. SDFWE.

General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-2004CS IBI ACKI	Wellbore No.	7
			5
Well Name	NBU 921-2004CS	Wellbore Name	NBU 921-2004CS
Report no.	_	Report date	12/15/2014
Project	UTAH-UINTAH	Site	NBU 921-20P PAD
Rig Name/No.		Event	COMPLETION
Start date	7/15/2014	End date	1/16/2015
Spud date	2/19/2014	Active datum	RKB @4,898.00usft (above Mean Sea Level)
UWI	SE/SE/0/9/S/21/E/20/0/0/26/PM/S/819/E/0/625/0/0		

1.3 General

Contractor	Job method	Supervisor	
Perforated Assembly	Conveyed method		

Summary

1.5

1.4 Initial Conditions

Fluid type		Fluid density	Gross Interval	8,114.0 (usft)-10,196.0 (us Start Date/Time	Start Date/Time	12/15/2014 12:00AM
Surface press.		Estimate res press	No. of intervals	11	71 End Date/Time	12/15/2014 12:00AM
TVD fluid top		Fluid head	Total shots	216	216 Net perforation interval	72.00 (usft)
Hydrostatic press.		Press. difference	Avg. shot density	3.00 (shot/ft)	3.00 (shot/ft) Final surface pressure	
Balance Cond	NEUTRAL				Final press, date	

: Intervals

RECEIVED: Feb.

2.1 Perforated Interval

Misrun How Guns Conveyed	
Misrun	
Reason	19.00 PRODUCTION
Charge weight (gram)	19.00
Charge desc. /Charge manufacturer	
Carr Phasing size (°)	3.125 120.00
Carr size (in)	3.125
Carr type /Stage No	0.410 EXP/
Diameter (in)	0.410
Misfires/ Add. Shot	
MD Shot I top base density (usft) (shot/ft)	3.00
MD base (usft)	8,114.0 8,115.0
MD top (usft)	8,114.
CCL@ CCL-TS MD (usft) top (usft)	
(nstt)	
Formation/ Reservoir	M E S A VERDE/
Date	12/15/201 M E S 4 VERDE/ 12:00AM

February 10, 2015 at 2:30 pm

12, 2015

Perforated Interval (Continued)

How Guns Conveyed															
Misrun															
Reason	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer															
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Carr size (in)	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Carr type /Stage No	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/
Diameter (in)	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP	0.410 EXP/	0.410 EXP/	0.410 EXP/
Misfires/ Add. Shot															
Shot density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD base (usft)	8,132.0	8,155.0	8,165.0	8,203.0 8,204.0	8,228.0	8,260.0	8,276.0 8,277.0	8,359.0 8,360.0	8,389.0	8,418.0	8,433.0 8,434.0	8,494.0	8,509.0	8,537.0 8,538.0	8,562.0 8,563.0
MD top (usft)	8,131.0	8,154.0	8,164.0	8,203.0	8,227.0	8,259.0	8,276.0	8,359.0	8,388.0	8,417.0	8,433.0	8,493.0	8,508.0	8,537.0	8,562.0
CCL-TS (usft)															
(nstt)															
Formation/ Reservoir	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/
Date	12/15/201 4 12:00AM	_	_	12/15/201 4 12:00AM	_	_			_	_		12/15/201 4 12:00AM		_	_

RECEIVED: Feb. 12, 2015

February 10, 2015 at 2:30 pm

Perforated Interval (Continued)

How Guns Conveyed															
Misrun															
Reason	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer															
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Carr size (in)	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Carr type /Stage No	EXP/	:XP/	EXP/	EXP/	XP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/
Diameter (in)	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP	0.410 EXP/					
Misfires/ Add. Shot															
	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD base (usft)	8,697.0 8,698.0	8,731.0	8,744.0 8,745.0	8,776.0 8,777.0	8,806.0 8,807.0	8,821.0	8,851.0 8,852.0	8,862.0 8,863.0	8,898.0	8,919.0	8,927.0 8,928.0	8,937.0	8,961.0	8,968.0 8,969.0	9,001.0 9,003.0
MD top (usft)	8,697.0	8,730.0	8,744.0	8,776.0	8,806.0	8,820.0	8,851.0	8,862.0	8,897.0	8,918.0	8,927.0	8,936.0	8,960.0	8,968.0	9,001.0
(nsft)															
CCL@ (nsft)															
/r iz	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/
	12/15/201 N 4 \ 12:00AM	12/15/201 N 4 12:00AM	12/15/201 N 4 \ 12:00AM	12/15/201 N 4 N 12:00AM	_	12/15/201 N 4 V 12:00AM	_	_	12/15/201 N 4 \	_	_	_	_	_	_

RECEIVED: Feb. 12, 2015

February 10, 2015 at 2:30 pm

Perforated Interval (Continued)

Lonveyed Conveyed															
Misrun															
Reason	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer															
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Carr type /Stage No	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/	EXP/
Diameter (in)	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP	0.410 EXP/					
Misfires/ Add. Shot															
	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	9,105.0 9,106.0	9,161.0	9,208.0	9,229.0	9,247.0	9,283.0	9,293.0 9,294.0	9,330.0 9,331.0	9,398.0	9,414.0	9,430.0	9,466.0	9,498.0	9,506.0	9,514.0
MD top (usft)	9,105.0	9,160.0	9,207.0 9,208.0	9,228.0 9,229.0	9,246.0 9,247.0	9,282.0	9,293.0	9,330.0	9,397.0	9,413.0	9,429.0 9,430.0	9,465.0	9,497.0	9,505.0 9,506.0	9,513.0 9,514.0
CCL-TS (usft)															
CCL@															
/c iż	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/			
	12/15/201 N 4 V 12:00AM	12/15/201 N 4 V 12:00AM	12/15/201 N 4 V 12:00AM	12/15/201 N 4 V 12:00AM	_	12/15/201 N 4 12:00AM	_	_	_	_	_	_	_	_	_

RECEIVED: Feb. 12, 2015

February 10, 2015 at 2:30 pm

Perforated Interval (Continued)

Date	Formation/ Reservoir	(JJsn)	(usft)	MD top (usft)	MD base (usft)	Shot N density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr type /Stage No	Carr Size	Phasing (°)	Charge desc. /Charge manufacturer	Charge weight (gram)	Reason	Misrun How Guns Conveyed
12/15/201 4 12:00AM	M E S A VERDE/			0	0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,625.0	9,626.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/15/201 4 12:00AM	M E S A VERDE/			9,656.0	9,657.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
	M E S A VERDE/			9,693.0 9,694.0	9,694.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,707.0	9,708.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,720.0	9,721.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/15/201 4 12:00AM	M E S A VERDE/			9,789.0 9,790.0	9,790.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,810.0	9,811.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/15/201 4 12:00AM	M E S A VERDE/			9,839.0	9,840.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,871.0	9,872.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/15/201 4 12:00AM	M E S A VERDE/			9,893.0 9,894.0	9,894.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
12/15/201 4 12:00AM	M E S A VERDE/			9,916.0	9,917.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
	M E S A VERDE/			9,927.0	9,928.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
_	M E S A VERDE/			9,942.0 9,943.0	9,943.0	3.00		0.410 EXP/	XP/	3.125	120.00		19.00	19.00 PRODUCTION	
	M E S A VERDE/			9,962.0 9,963.0	9,963.0	3.00		0.410 EXP	XP/	3.125	120.00		19.00	19.00 PRODUCTION	

RECEIVED: Feb. 12, 2015

February 10, 2015 at 2:30 pm

Perforated Interval (Continued)

Misrun How Guns Conveyed										
Misrun										
Reason	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer										
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Carr size (in)	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Diameter Carr type /Stage No (in)	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/	0.410 EXP/
Misfires/ Add. Shot										
Shot density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD base (usft)	9,971.0 9,972.0	9,982.0 9,983.0	10,079.0 10,080.0	10,092.0 10,093.0	10,123.0 10,124.0	10,130.0 10,131.0	10,138.0 10,139.0	10,149.0 10,150.0	10,168.0 10,169.0	10,195.0 10,196.0
MD top (usft)	9,971.0	9,982.0	10,079.0	10,092.0	10,123.0	10,130.0	10,138.0	10,149.0	10,168.0	10,195.0
CCL-TS (usft)										
(nsft)										
Formation/ Reservoir	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/	M E S A VERDE/
Date	12/15/201 4 12:00AM			12/15/201 4 4 12:00AM			12/15/201 4 12:00AM			

Plots

February 10, 2015 at 2:30 pm